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Economics Outlook for the 1980s in South Dakota : Highlights of Papers Presented at Eighteenth Agri- Business Day

South Dakota Agricultural Experiment Station

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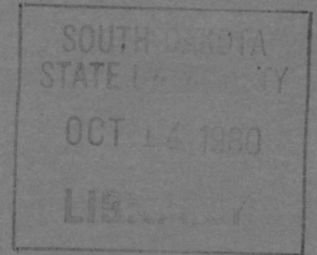
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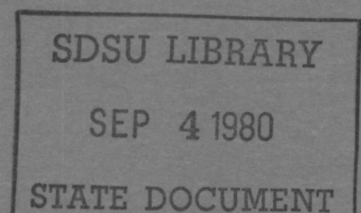
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**Economics Outlook
for the 1980s
In South Dakota**



**Highlights of Papers Presented at
Eighteenth Agri-Business Day
March 25, 1980**



Economics Department
Agricultural Experiment Station

South Dakota State University
Brookings, SD

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BASIS FOR ECONOMIC SURVIVAL AND GROWTH

J. Carroll Bottum, Professor-Emeritus, Purdue University
March 25, 1980

It is a delight to be here at South Dakota State University this morning. As I have traveled about the U.S. and in other countries of the world I have become increasingly appreciative of the quality of education and vision of life which I received from the staff of this institution.

For a number of years in Indiana I went from farm to farm assisting them in keeping farm accounts and analyzing their businesses. Out of that experience I learned that there were certain principles that made for success in farming.

Later I had the opportunity to visit many nations in the world and observe their government and their people. Out of this experience and the readings of history I came to believe in one fundamental principle with my great and good friend, Ted Schultz, who was at South Dakota when I was. In his speech this year accepting the Nobel Award he said, 'I agree with Margaret Mead: "The future of mankind is open ended." Mankind's future is not foreordained by space, energy and cropland. It will be determined by the intelligent evolution of humanity.'

This concept is of great importance today when there is so much said and written about shortages of food, energy and water and, yes, environment.

If we have the vision to allow for research, education and enterprise we can overcome them as we have in the past.

Let me illustrate:

When I went to Indiana in the late 1920's the average yield of corn was 35 bushels per acre. That was just 1 1/2 bushels more than the yield in the decade of the 1870's, fifty years before. In the 1970's, fifty years later, it was approaching the 100 bushel level. The farmers between 1870 and the 1920's were doing their best but after the 1920's we added great amounts of research.

When I was farming in South Dakota in the early 1920's my two brothers and I farmed 800 acres. Fifty years later my brother and his two sons were farming that 800 acres plus another 2400 acres or 3200 acres and they were getting much higher output than we were per acre. That is what technology has done in my lifetime on our farm. It took a lot of research and development to bring that change about.

My Dad came to South Dakota in 1883 and he and his family feared the droughts. In 1934 I took part of our cattle to Indiana and wintered them for eight months because we had no feed in South Dakota. That was a long winter paying the board bill on those cattle, fortunately they about doubled in price over the winter. Three years ago we discovered irrigation water just 100 feet down so with the modern irrigation equipment, we can put a base of roughage behind the breeding herd. For 100 years we panted for water and it was just 100 feet away.

We have in the United States today the most cropland measured by productivity in our history.

Inflation

We have not been willing to pay the cost for dealing with inflation, for dealing with energy, for dealing with defense or for dealing with productivity. We have crippled ourselves to make the suit look right, and sooner or later we are going to be forced to pay for the alterations.

Having said that let me quote Ralph Waldo Emerson when he said, "A democracy is like a raft bobbing here and there on its course but not often sinking, while a dictatorship is like a canoe moving swiftly but often hitting a rock and going under. We are on a raft and it is frustrating when it gets off its course as it has been.

From the 1930's until recently, we put more emphasis on distribution of the income and privileges. This was done through taxes, government programs, regulations and cushions built into the economy for many groups. If we had a social problem, we wanted a quick solution and we threw money at it and then threw more money even though it was a long-time problem.

In the late forties, we made the transition to peace without serious difficulty. In the 1950's we had a nation with increasing productivity and nearly stable prices. Prices from 1950 to 1966 rose 1.8% per year. Then in the mid 1960's we financed the Vietnam War largely by borrowing and laid the foundation for later inflation. In the 1970's our productivity per worker reached nearly zero. Energy costs began to rise in the 1970's and conventional defense budgets in real dollars were shaved. We tried to cover these depletions by loose monetary policies. Now we stand today with 18 percent inflation, low productivity per worker, short energy supplies, and a defense system that needs building up.

What Can We Do About It?

- 1 - Follow a restrained monetary and fiscal policy.
- 2 - Increase the share of the national income stream going into investment.
- 3 - Increase the share of our income going for defense.
- 4 - Allow fuel prices to rise and subsidize the energy bills of the poor.

A program to increase bank reserves, raise the Federal Reserve discount rates along with an appropriate Federal Reserve open market money policy and other credit controls will reduce inflation. The money supply from 1966 to 1978 increased \$380 billion while output increased 90 billion. If you take the national economists today from Galbraith to Friedman, they have varying programs to control

inflation but restraining credit and fiscal policy are a part of everyone's package. Wage and price controls are included by some but they are like taking aspirin if you have pneumonia. You had better take the antibiotics with the aspirin. Likewise, we must take the credit and fiscal restraints along with the price controls. The danger with price controls is that we might temporarily let up on the real cure. The fundamental point I want to make is that we can control inflation. When you get the cost of money or interest rates above the expected inflation rate, people stop buying ahead and slow their investments.

The longer-run problem of increasing the flow of national income into savings or investments can be done in a number of ways - such as exempting from federal taxes savings of \$500 per year per person, decrease double taxation in dividends, increase the investment tax credit, allow more rapid depreciation of capital items, lower corporation tax, etc.

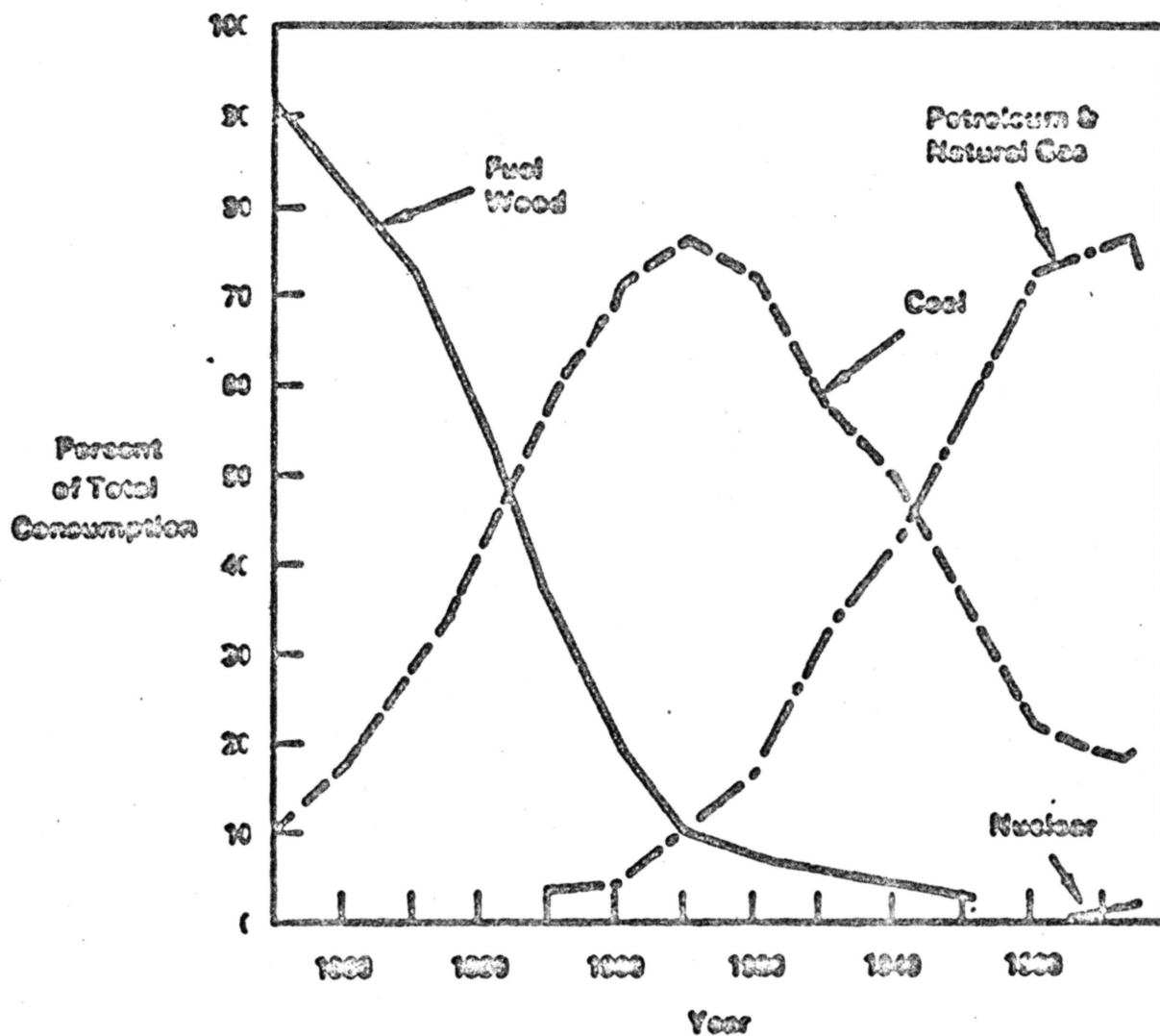
The solution to defense is obvious although not acceptable to all at this period in time, but the Iranian and Afghanistan situation is making converts every day.

Energy

Now, let us turn to energy which has special significance to agriculture.

The United States by some is called an energy glutton. Yet if we compare energy consumption in the household and the commercial sector in the United States with that in other developed world countries, we find that although the United States does consume more generally, the differences are not near so large as differences in total energy consumption per person. The differences are in the transportation sector. That is where we consume huge amounts of energy per person. (See Charts I, II, III and IV)

U.S. Energy Consumption Patterns by Energy Source^a

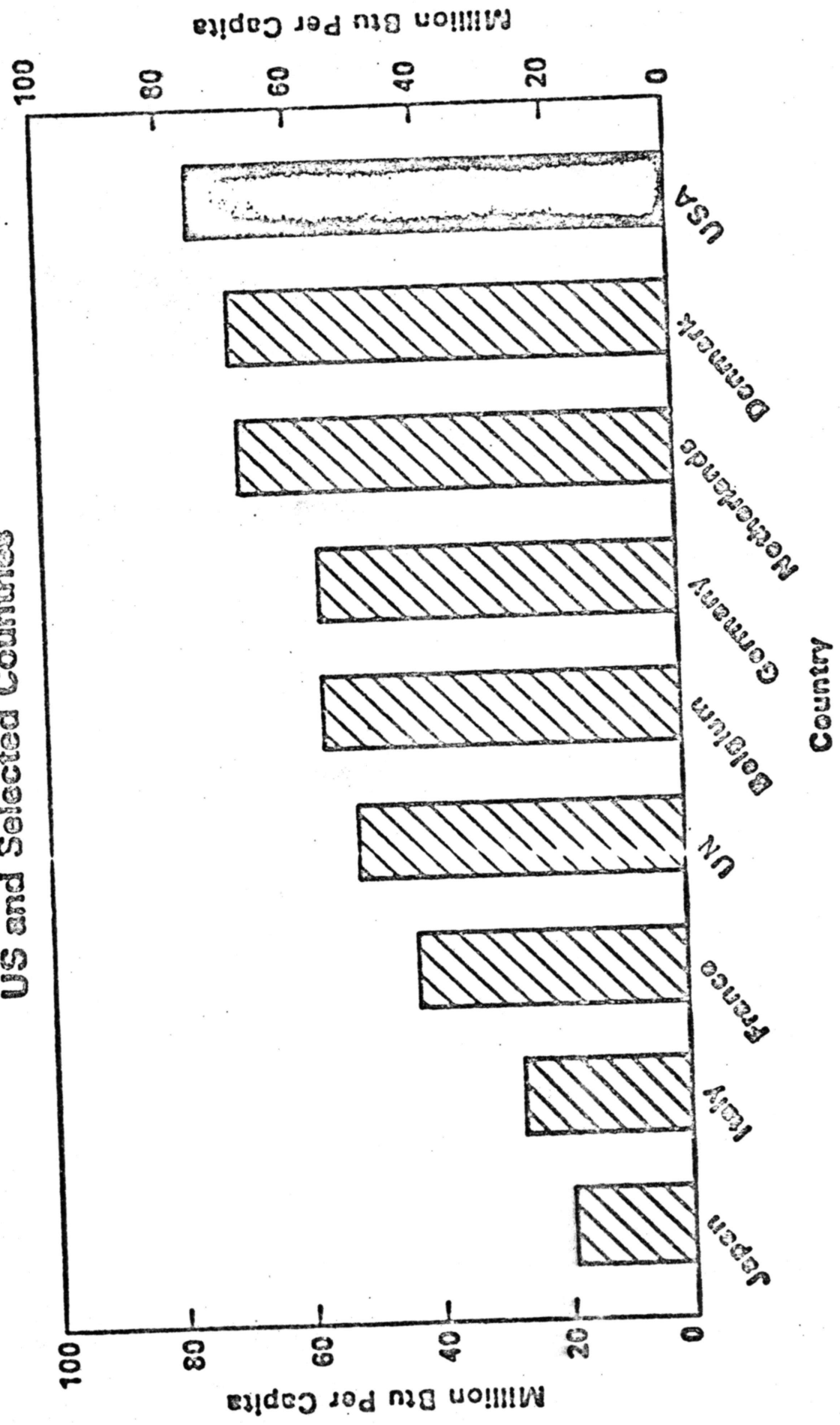


^a Sources: "Historical Statistics of the United States,"
Bureau of the Census; U.S. Bureau of Mines.

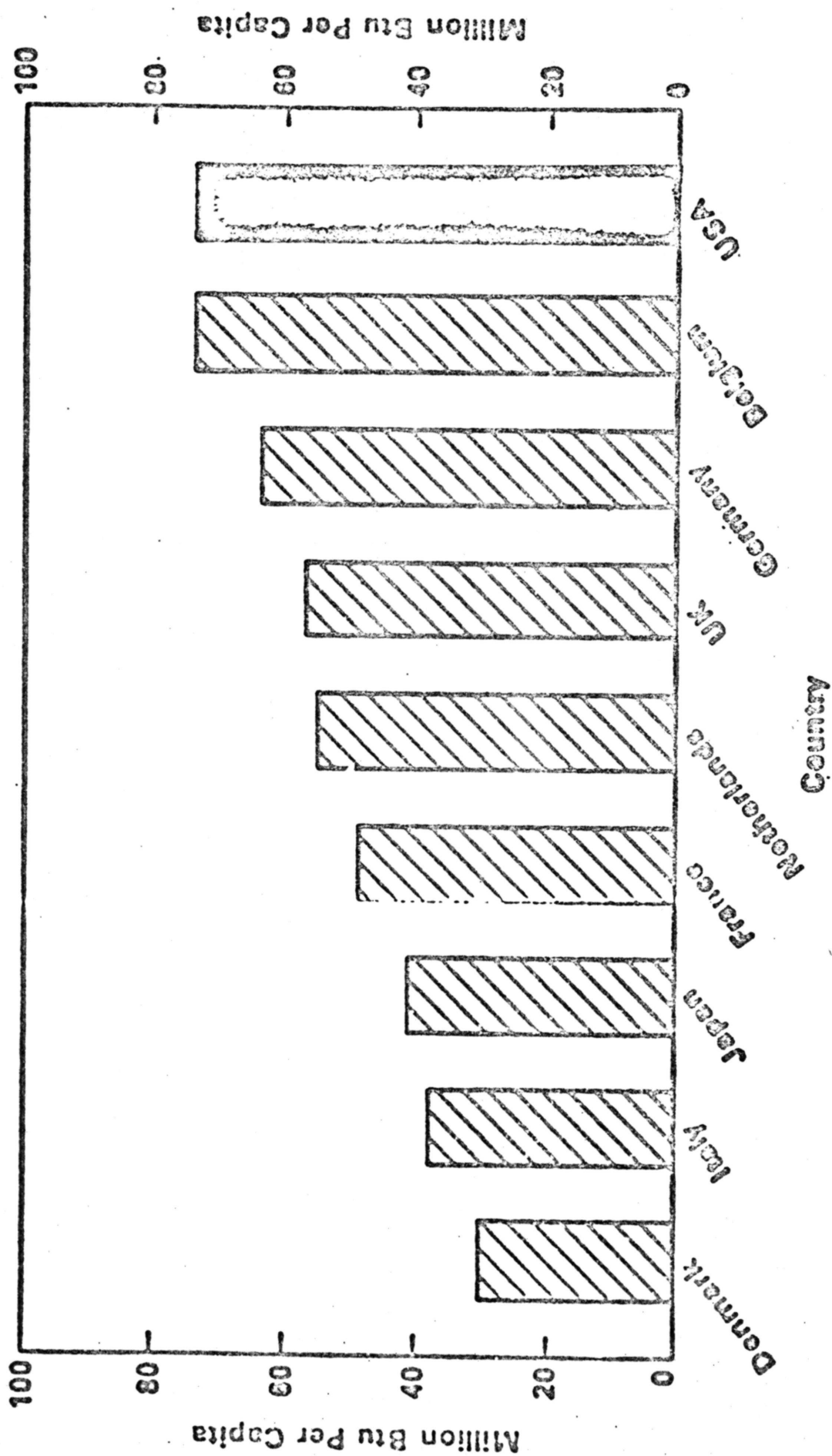
Chart I

Household and Commercial Energy Consumption Per Capita, 1975

US and Selected Countries

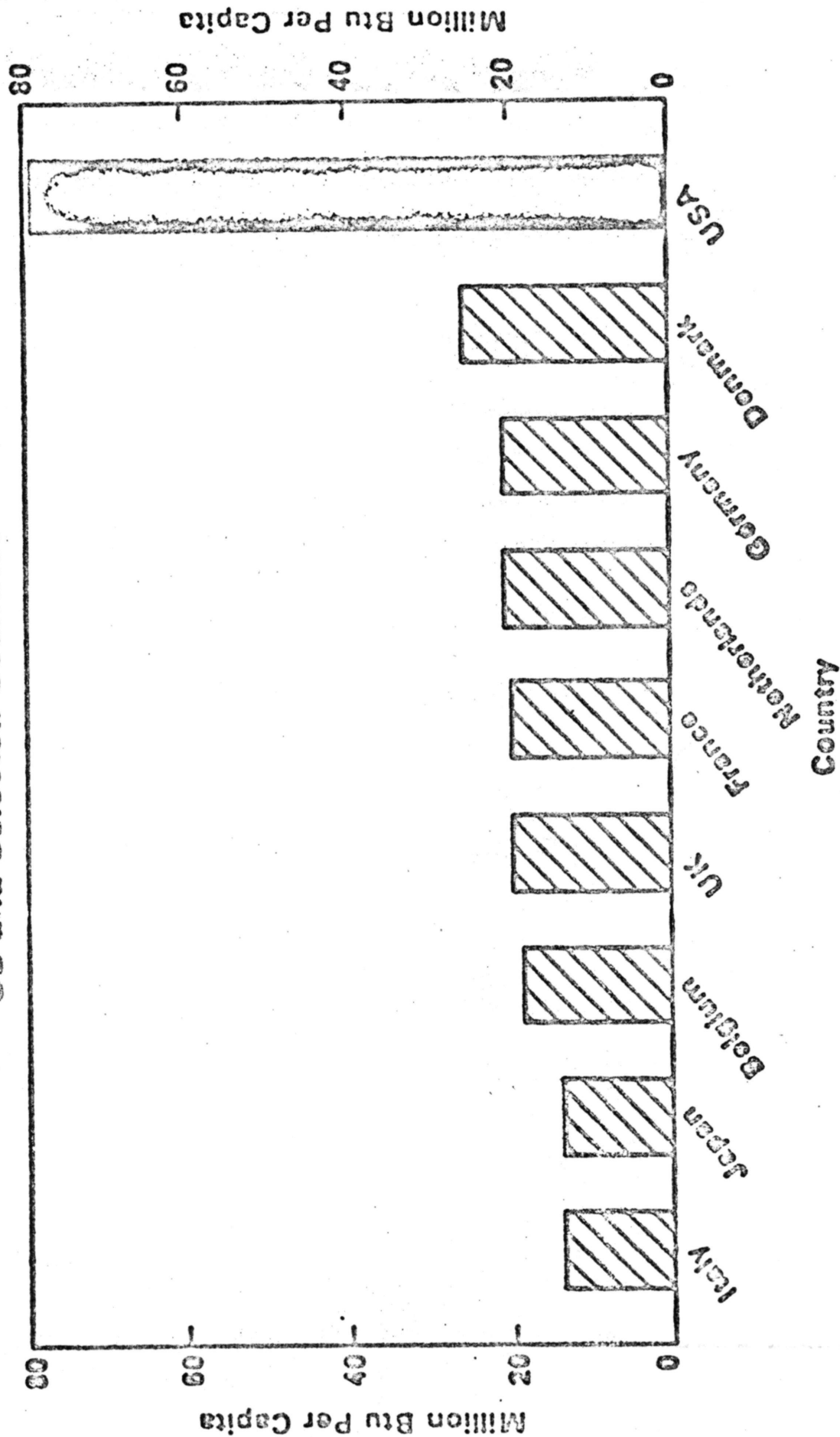


Industrial Energy Consumption Per Capita, 1975 US and Selected Countries



(Chart III)

Transportation Energy Consumption Per Capita, 1975
US and Selected Countries



The energy which we use in transportation is primarily liquid energy, and the crux of our problem is an energy liquid problem. We also have a national security problem because of our heavy dependence on foreign sources for liquid energy.

Approaches to Solving Our Energy Problem

Given that our energy problem is one of energy liquids and the national security problems associated with dependence on foreign source of energy liquids, what alternative approaches do we have? We can divide the possible approaches into five different categories: (1) energy conservation, (2) increases in domestic oil supply, (3) change consumption from liquids to solids, (4) convert other sources to liquids, and (5) move to renewable energy sources.

Conservation - Energy conservation has been called our cheapest energy source. Up to a point this is correct. If Congress really wanted us to conserve energy they should send us a message. That message would be that through higher prices; we would each find it in our own interest to conserve.

Increase the Oil Supply - The second approach to solving the energy problem is to try to increase the oil supply. Increases in domestic oil production could come about from two different sources: increased exploration of new oil deposits and enhanced recovery of existing deposits.

With current technology, we are able to produce only about one-third of the actual oil in place. The remaining two-thirds of the oil in place is trapped in the geological formation and requires additional expense to be recovered. New techniques are being developed to inject steam, water, and chemicals into the formation to drive a portion of the remaining oil towards a producing well.

Change Consumption from Liquids to Solids - The third approach is to change consumption from liquids to solids. Significant amounts of utility and industrial process heat using fuel oil could be converted to coal thereby saving significant amounts of liquid energy. Another longer-term method would be to shift some of vehicle fleet from liquids to electricity. The problem here is keeping reasonably clean air.

Convert Other Sources of Energy to Liquids - Liquid fuels can be made from coal and shale. These syn-crudes could become economic with either government subsidies or government taxes on petroleum. It would take 6 or 7 years at least to bring those plants on stream.

Renewable Energy Resources - The fifth approach is to move in the direction of using more renewable energy resources. These are biomass, wind power, ocean thermal, hydropower, and other energy sources related to solar energy.

We will solve our liquid energy problems by turning to all these sources instead of just one this time. (Chart V)

Energy From Agriculture

Biomass energy encompasses a wide range of energy sources including forestry, crops, crop residues, agricultural wastes, aquaculture, mariculture, and municipal solid wastes. I will limit my discussion to crops and crop residues. (Chart VI).

Crop Residues

The estimate for total crop residue each year in the United States is about 400 million tons, most of which is from corn and small grains. After deducting the residue needed for soil conservation and losses in harvesting, transportation, and storage systems we arrived at a total useable residue of 78 million

COST PER GALLON LIQUID FUEL

FEBRUARY 1980

Refinery Gasoline	\$.90- .95
Crude Oil \$28-40 Per Barrel	\$1.07-1.52
Oil Recovery \$25-50 Per Barrel	\$.95-1.90
Coal Liquids	\$1.52-2.29
Methanol - Coal	\$.50- .95
Shale Liquids	\$1.33-1.90
Ethanol - Corn \$2.40 Per Bu.	\$1.15-1.40
Ethanol - Cellulose	\$1.25-2.00

RESOURCE AVAILABILITY

1978

Source	Ethanol (Bil. gal.)
--------	---------------------

Crop residues	1.5 - 2.3
---------------	-----------

Crops

1. From available cropland not now cropped	5.2 - 8.7
---	-----------

2. From set-aside acres (1978)	2.4
-----------------------------------	-----

Forage	2.7 - 6.0
--------	-----------

Totals	11.8 - 19.4
--------	-------------

tons per year. The majority of useable residue is concentrated in the Corn Belt and Great Plains states. The top five states - Minnesota, Illinois, Iowa, Indiana and Ohio contain half the total U.S. useable residues. About 2 billion gallons of ethanol could be produced from these residues in the U.S. We figure 185 million gallons could be produced from residues in South Dakota. (Chart VII)

Grain Crops

In 1978, about 6.1 million acres of corn land and about 8.4 million acres of wheat land were in set-aside or diversion programs. The potential production from these set-aside lands was 270 million bushels of corn and 226 million bushels of wheat. When alcohol is produced from grain, for every three pounds of grain used, one pound of a by-product called distillers grain is produced. That distillers grain can be fed just as corn for beef cattle or it can be substituted for soybean meal in animal diets. Since this distillers grain is recycled, so to speak, back into the animal feed system, the 600 million bushels of potential production can be increased by another 300 million to account for the recycled grain, hence, about 900 million bushels of grain could have been withdrawn from the agricultural sector. About 2.4 billion gallons of alcohol could have been produced from the excess crop production capacity in 1978.

Our best estimate is that somewhere from 30 to 50 million acres would be available for expanded crop production if the prices were right. Assuming corn yielding 65 bushels per acre were averaged, 2 to 3 billion bushels of corn could be grown on this land. Producing alcohol from this corn would also yield additional quantities of distillers grains to be absorbed into the feed supply. It would also provide from 5 to 7 1/2 billion additional alcohol.

MILLION OF TONS USABLE RESIDUE

State	Total	S.		Sorghum	Rice	Cumulative
		Corn	Grain			% of U.S. Total
		100 Tons				
Minnesota	10217	4150	6067			13
Illinois	8984	7956	1009	18	—	25
Iowa	8533	6930	1614	9	—	36
Indiana	6158	4564	1588	6	—	43
Ohio	3817	2556	1261	—	—	48
Wisconsin	3682	1716	1967	—	—	53
California	3274	250	1812	97	1115	57
Washington	2986	—	2986	—	—	61
Kansas	2526	269	1540	718	—	64
Nebraska	2357	1781	575	—	—	67
Texas	2348	582	547	—	1157	70
Arkansas	2327	10	408	55	1854	73
S. Dakota	2324	480	1844	—	—	76
Idaho	1994	21	1972	—	—	79
Michigan	1721	937	784	—	—	81
Missouri	1641	805	538	296	21	83

Forage Crops

There are about 102 million acres of pasture and hayland in the humid areas that could support increased yields for energy production. Through more intensive management (principally fertilization and more frequent cuttings) forage yields could be increased by one or two tons per acre. However, we estimate that the forage material could be produced for a price of not less than \$40 per ton and perhaps higher. This compares with residue prices beginning around \$27 per dry ton.

To estimate a range of potential energy production from pasture and hay land acreage, we assume the lower limit is two-thirds of the one ton per acre increment and the upper limit is three-fourths of the two ton per acre increment. Alcohol production from this would range from 2.7 to 6.0 billion gallons per year.

The potential from agriculture, therefore, ranges from 12 to 19 billion gallons of alcohol.

While there are other national policies that could be used and may yet be used for bringing the substitute liquid fuels into production, we have embarked on a subsidy program for fuels from agriculture. They include the 4 cent federal tax exemption for gasohol and the financing of agricultural alcohol plants.

Summary

Our future is not limited by crop acres or energy but by our freedom and development.

For the next 5 to 10 years inflation is likely to continue but at a declining rate. Of course there always is the possibility the present high interest rates could be incorporated into production costs and a more rapid rate of inflation

could occur. There is also the possibility that we could be thrown into a serious depression. However, these are not likely scenarios. In our business activities we have to make our decisions on what is most likely and then move ahead, at the same time we keep our eye over our shoulder.

We will up our defenses and probably direct more of our national income stream into production.

We will likely use agricultural products to make liquid fuels, using grains first, crop residues second, and forage crops third. This will put another leg under agricultural income.

Barring war, the 1980's look to be an exciting period in agriculture with all the technologies that will be brought on by the energy demand on agriculture.

IMPROVING FARM BUSINESS MANAGEMENT SKILLS

by

Wallace G. Annderud
Extension Economist-Farm Management

Inflation continues to leave its imprint on farm input costs, land sale values increased by 18% in 1977, 10% in 1978 and 19% in percentage points, but in 1979 we were above the national average of 16% by 3 percentage points. In 1980 it is predicted that the national average increase will be about 14%. Since land in South Dakota is still relatively cheaper than land in the neighboring states, very likely South Dakota land values will inflate at least as fast as the national average and possibly faster.

Variable input costs have trended upward at the same time cash rental rates increased an average of 27% as land prices increased over 40% from 1978 to 1980. The recent sharp increases in crude oil costs means that fuel and lubrication expenses per acre in 1980 will be 2.5 times as high as they were in 1978. The cost of borrowed capital has doubled.

Preliminary budget estimates indicate that costs of producing corn in 1980 will be over 25% higher than they were in 1978 not considering higher costs for land. Rates of change in costs differ for each crop so an important part of management is analyzing these differences and estimating expected net income from each crop in order to determine the most profitable crop combination for the individual farm. Details for these kinds of comparisons is a topic area that will be covered by the next speaker on today's program.

In the early 80's and especially in 1980 inflation of input costs will be the major problem. Most people believe that 1980 could be one of the toughest years for farmers. With the carry over supplies available for most crops it is expected that crop prices generally will not be high enough to cover all costs of production.

Selection of proper machinery combinations of the right size is important because if too large a size is selected cost per acre per year will be higher than necessary. However, if too small a size combination is selected critical jobs such as planting and harvesting will not get done at the optimum time so that yield is reduced, thereby, cutting down net income potential.

Excessive maintenance costs can almost always be traced to (1) overloading, (2) too much speed, (3) poor daily maintenance and (4) not stopping for repairs at first warning. Repairs for machinery handled in this manner result in repair costs at least 25% higher than average. Records also show that for the best managers repair costs are only about 75% of the average repair costs for groups of farmers in record associations.

Information guides can be used that show the optimum usage of machinery for trading purposes. However, sometimes new developments in machine design may result in the machine becoming obsolete. The good manager selects equipment so that minimum hourly costs are achieved before the machine becomes obsolete. An up-to-date log book for each machine can be a simple useful tool for deciding when to trade.

In some cases the farm may not have enough use to justify owning the machine so that custom hire may be the answer. Break even acres to own can be estimated by the following formula..

$$\text{Break even acres} = \frac{\text{Annual fixed cost to own machine}}{\text{Custom rate/acre} - \text{operating cost/acre}}$$

Because of the high cost of all inputs this year and the high cost of borrowed capital it is important that all inputs be balanced for the individual farm. This situation means that it is especially important that only high germinating seed of recommended varieties are planted. Weed control by both chemical and tillage.

Hence, improved management is needed in 1980 to insure that as much of the costs are covered as possible. This means management in all areas such as financial planning, machinery use and purchase, input management such as seed, fertilizer, herbicides, and insecticides, land management, livestock enterprise management and marketing strategies must be as good as possible in order to survive the early 80's.

For financial management good records are essential. In years like 1980 with a tight money situation and high interest rates, lenders are naturally more selective in who they borrow to and how much. In order to get the credit needed, net worth statements or balance sheets are needed for two or more years so changes in financial position can be measured. Income statements are needed to estimate the annual potential income for the farm or ranch unit. Finally, a cash flow statement is needed to show the expected financial position throughout the year under the present plan and for expanded plans they may be expected for three or more years. In order to supply these statements the manager needs good complete records of his whole operation.

In projecting ahead, he needs to use the best technical information available related to production and price estimates for the future. Extension specialists in all areas can supply most of this information through local county agents and directly through area meetings. Two marketing specialists will discuss expected changes in aspects of marketing and farm supply this afternoon.

Machinery management for least cost requires: (1) careful selection of proper machine size and tractor horsepower, (2) an improved program of maintenance, (3) replacement at the optimum time, and (4) the option of custom hire for some jobs or leasing. Methods are important so that expensive fertilizer is not wasted growing weeds. Improved management implies that insect problems are controlled before they develop so that they don't result in significant crop yield reductions. Extension specialists make technical information in all of these areas available from the latest research to local county agents so that the good manager can stay up to date in his knowledge of the best practices in his area.

In 1980 selection of the combination of crops to plant and handling of the livestock program on the farm will determine how much the farm operator receives for his unpaid labor, management, and equity in land. The details of how crops compare and livestock returns will be covered by other speakers on the program today.

I would like to end on a more optimistic note than we have been talking. In the long run prices for farm products tend to rise to the cost of production. Also, in the long run, predictions are for about a one and one half percent annual increase in farm productivity. Sometime during the next ten years one farm advisory service has predicted that prices will rise to \$15 soybeans, \$8 wheat and \$5 corn and that by the year 2000 soybeans will reach \$26. If productivity continues to increase and the predicted prices occur then the good manager can continue to operate and prosper given that inflation of costs is brought under control within the next year.

Training in Enterprise Selection and Planning

by

John N. Maher
Extension Area Farm Management Specialist

The purpose of my job as an Extension Area Farm Management Specialist in the 21 South East Counties of South Dakota is to help young people become established in farming and select crop and livestock enterprises that will generate their highest income potentials, utilizing the resources they have available. I have not experienced a more difficult time than 1980 to do this in the past 20 years as a County Agent and 9 years in Farm Management work.

The primary negative long term economic factors of high inflation, high interest rates and high energy costs have already been mentioned by the two previous speakers, Dr. J. Carroll Bottum and Dr. Wallace Aanderud.

In spite of these negative factors, we in South Dakota are willing to compete with any other area, however we have a long range transportation problem and some other short range negative factors which we must cope with in 1980. They include:

1. Below average soil moisture in many areas this spring.
2. Low water levels in dams and dug outs on grass areas out West.
3. A grasshopper threat on two million acres.
4. The recent drop in livestock prices, which greatly determine the livelihood of South Dakota farm and ranch operators. For the past three weeks livestock prices have been on a greased skid.

On the bright side we can say it has been a nice winter which saved a lot of feed and energy wintering livestock.

Points I want to discuss:

1. How the 10 Step Farm Planning Program serves as a guide in selecting crop and livestock enterprises to develop better farm plans.
2. Key factors that generate income in a farm plan, with a look at income returns from crop and livestock enterprises.
3. A brief look at what another state is doing in Farm Management for young farmers, compared to South Dakota.

The South Dakota 10 Step program is a guide to help develop a farm plan to its' highest income potential, within the land, labor and capital resources the operator has available.

Based on a 5 year average yield the operator is able to determine the animal unit months of grazing, the tons of hay equivalent and bushels of corn grain equivalent his farm will produce during an average year. He can then gear the grazing hay and grain production to best fit the requirements of selected livestock enterprises that will generate the highest income potentials for his farm operation.

The 10 Step Farm Plan serves as a base to obtain investment figures and cost estimates to use for other programs and analysis such as:

1. Develop cash flow estimates.
2. Develop father-son partnership operations and income share agreements.
3. Use as a vehicle to talk over credit needs with the lender.
4. Analyze crop and livestock enterprise alternatives, additional land, building, machinery and other capital investments to generate highest income potentials within the labor, management and other resources available to the operator.

The 10 Step Program provides the opportunity to analyze 43 livestock budgets so that the operator can select those that will generate the highest level of net income return by utilizing his land, capital, labor and management ability.

The operator can estimate profit or loss potentials on paper rather than making the mistake under actual operating conditions.

Most of the 350 young farm operators that each year attend three day farm planning sessions in 23 locations in the 21 counties I serve carry more practical farm management around in their heads than is written in most books. Putting all the facets or segments of farm management and farm operating together at the correct time and in the correct amount for generating highest income returns can be very confusing. The 10 Step Program clearly provides the guide lines needed to develop a farm plan and shows the opportunities that exist at a definite point in time.

Not having a farm plan to follow can be compared to some of you young fellows taking a chance on a blind date, or a contractor trying to build without a blue print, or a hunter taking a blind shot in the dark.

The kind of a farm plan developed and livestock enterprises selected will depend upon:

1. Age of the operator.
2. Owned equity and capital resources available.
3. The operator's labor and management ability.
4. The farm location and crop and livestock enterprises adapted to the area.

The livestock enterprise budgets are an important guide to provide the following information for each unit of livestock:

1. The grazing, hay and grain requirements and other operating costs.

2. The required operating capital investment and percent return on operating capital.
3. Income over direct operating costs and net income return over all costs to labor and management.
4. The hours of labor required.

There are no secrets in farm management, but there are certain key factors which determine the level of income a farm will generate based on average crop yields and projected costs and expected livestock prices.

Chart 1 shows the average annual operating capital, the percent return over direct operating costs, the net income return to labor and management over all production costs and the annual hours of labor per unit for the major livestock enterprises.

The upper line shows the figures that existed for the year 1979. The lower double range of figures show the range that has existed for any 5 year period during the last 25 years.

Analyzing these figures will show a wide difference in the annual operating capital requirements, percent return on operating capital, net income return to labor and amangement and annual labor requirement per unit of livestock among the major livestock enterprises. Note that those providing the highest income returns on invested operating capital also have the higher labor and management requirements.

Provided the information shown in Chart 1, the young ambitious operator with limited land and capital resources will quickly determine that the dairy and hog enterprises have the greatest potential to generate the highest level of income for his farm over the long range period.

The older operator with adequate capital resources, who owns a high percent equity in his land, but finds labor his most limited resource may well be satisfied to operate with a normal cropping program and livestock enterprise with lower labor requirements and income returns on capital invested.

The comparison of net income returns for the major livestock enterprise will hold true over the long term period in spite of some temporary low price periods similar to what is taking place at present for the hog enterprises. Conditions change over time. There are only about three things that never change. We all have to pay taxes, someday we have to die and we can't take it with us.

Expected total production costs, including direct operating and fixed costs for major crops for 24 counties in Southcentral, West Southeastern and East Southeastern areas of South Dakota are estimated to range as follows for 1980: corn - \$2.34 to \$2.70 per bushel; oats - \$1.96 to \$2.03 per bushel; spring wheat - \$3.87 to \$5.01 per bushel; alfalfa hay - \$39.83 to \$42.20 per ton; Barley - \$2.61 to \$3.10 per bushel; winter wheat - \$3.79 per bushel; Flax - \$7.77 to \$7.88 per bushel; soybeans - \$5.45 to \$6.49 per bushel; and grain sorghum - \$2.71 to \$2.81 per bushel. In all areas the production costs are higher than the current market prices being paid.

CHART NO. 1

PER UNIT OF LIVESTOCK	Operating Capital	Percent Annual Income Return on Operating Capital	Income Over Direct Operating Costs	Net Income Over Total Production Costs*	Hours Labor Per Year Based On Number Of Head & Facilities
BEEF COW-CALF For 1979 For Last 25 yrs (5 yr. avg.)	\$850 \$400-500	23% 5-10%	\$194 \$20-\$50	\$100	4-10
GROWING & FINISHING BEEF For 1979 For last 25 yrs. (5 yr. avg.)	\$400 \$150-\$350	17% 5-20%	\$70 \$15-70	\$35	2-10
EWE-LAMB For 1979 For last 25 years (5 yr. avg.)	\$94 \$40-80	32% 10-20%	\$30 \$4-\$16	\$15	2-4
HOGS-PER SOW UNIT For 1979 For last 25 yrs. (5 yr. avg.)	\$425 \$400-\$550	107% 40-80%	\$456 \$150-\$450	\$230	15-35
DAIRY COW For 1979 For last 25 years (5 yr. avg.)	\$1290 \$500-800	73% 40-60%	\$943 \$200-\$480	\$480	40-75

* Note-Net income return based on deduction of 12% interest costs and 17% annual building charges on new facilities.

The following crop budgets for corn and soybeans based on average yields, and total production costs for the 24 country area show how two of the major crops compare per acre in:

- I. Gross Income
- II. Total Production Costs
- III. Net Income Return to Labor and Management
- IV. Break even selling price per bushel to cover all production costs

Per Acre Income Return

Average yield (Corn)	55 bu.
Price	\$ 2.20
I. Gross Income	\$121.00
Cash field operating costs	57.85
Int. on cash costs (11%)	6.36
Fixed machine costs	20.00
Fixed land costs (land @\$600/acre @ 6%)	36.00
Labor Charge	9.00
II. Total costs	\$129.21
Loss to Management	-8.21
III. Return to Labor & Mgmt.	.79
IV. Total cost per bushel of corn	\$ 2.34
Return over direct field operating costs	\$ 63.15

Per Acre Income Return

Average yield (Soybeans)	20 bu.
Price	\$ 6.00
I. Gross Income	\$120.00
Operating costs	39.85
Int. on operating costs @ 11%	4.38
Fixed machine costs	18.00
Fixed land costs (land @ \$600/acre @ 6%)	36.00
Labor charge	9.00
II. Total costs	\$107.23
Return to management	12.77
III. Return to Labor & Mgmt.	\$ 21.77
IV. Total cost per bushel of soybeans	\$ 5.36
Return over direct field operating costs	\$ 80.15

A farm operator will normally want to follow these guide lines in developing a crop plan for the farm.

1. First - make certain enough acres are devoted to producing the animal unit months of grazing and tons of hay equivalent required by the livestock enterprises.
2. Secondly - attempt to produce as much of the corn grain equivalent as cropping conditions and remaining acres will permit. Additional grain can be purchased for the livestock enterprises.
3. Third- after the livestock enterprise, grazing hay and grain requirements have been satisfied, the operator can devote the remaining acreage to the high cash return crops.

The current high production costs and low grain prices make it essential that a young farm operator must derive profits from livestock to stay in business. He is compelled to have at least one of the high income return livestock enterprises on his farm to make a living and keep his debts paid.

The following livestock enterprise budgets are identified by number as they appear in the green livestock budget handbook (EMC 666). Since the requirements do not change, the operator can use his own estimates to arrive at total production costs and expected income returns for any of the 43 budgets in the handbook.

The livestock budgets listed here will show the comparison per unit of the major livestock enterprises on basis of:

- I. Gross Income
- II. Total Production costs
- III. Net Income Return to Labor and Management
- IV. Break even selling price cwt. based on to 1 production costs.
- V. Percent net income return on operating capital.

B-4: Cow Unit-produce cross bred calves; buy 16% annual replacements; 1 bull per 25 cows.

I. Receipts per cow (Fall 1979 market)	
Steer calf @ 485 lbs. X .94 X .46	\$209.71
Heifer calf @ 445 lbs. X .82 X .46	167.85
Cull cow at 1200 lbs. X .55 X .15	99.00
Gross Sales	\$476.56
II. Total costs	
Charge for yrly. replacement (16% X \$500)	\$ 80.00
Feed, Hay, Grazing & other costs	187.41
Building Eq. costs (\$70 X 15%)	10.50
Interest on Operating capital (\$840 X 12%)	100.80
Total Costs	\$378.71
III. Net Income to labor & mgmt.	\$ 97.85
at 8 hours labor	12.23 per hr.
IV. Break even selling price on calves	65.00 cwt.
(about \$70 cwt. on steers & 60 cwt. on heifers calves)	
V. Net return = 11.7% on operating capital	

B-8: Winter Steer Calves; 5 mos., Oct. to March, at average daily gain 1.5 lbs.

I.	Receipts (hedged on spring futures 1980)	
	Feeder Steer 650 lbs. @ \$.80	\$512.20
	(less 1.5% death loss)	
II.	Total Costs	
	Steer calf 425 lbs. @ \$.95 (Oct. 1979)	\$403.75
	Feed and other costs	71.88
	Building & Equip. costs (\$42 X 15%)	6.30
	Interest on operating capital (12% X \$194)	23.28
	Total Costs	\$505.21
III.	Net Income return per Steer	\$ 6.99
	to Labor and Mgmt. (@ 3 hrs. labor/steer)	2.33 per hr.
IV.	Break even selling price	77.73 cwt.
V.	Net return = 3.6% on operating capital	

B-8: Winter Steer Calves; 5 mos., Oct. to March, at average daily gain -1.5 lbs.

I.	Receipts (sold on 1980 March 18 cash market)	
	Feeder Steer 650 lbs. @ \$.75	\$480.19
	(less 1.5% death loss)	
II.	Total costs	
	Steer calf 425 lbs. @ \$.95 (Oct. 1979)	403.75
	Feed and other costs	71.88
	Building & Equip. costs	6.30
	Interest on operating capital (12% X \$194)	23.28
	Total Costs	\$505.21
III.	Net Loss	-\$ 25.02
	to Labor and Mgmt. (@ 3hrs. labor/steer)	- 8.34
IV.	Breakeven selling price	\$ 77.73 cwt.
V.	Net loss = -13% on operating capital	

10-A: Summer Graze Steer; 500 lbs, 5.5 months, April to Spetember, gain 225 lbs.

I.	Receipts (hedged on Sept 1980 futures)	
	Sell feeder steer 725 lbs. at \$.70	\$504.92
	(less .5% death loss)	
II.	Total costs (purchased steer on March 18, 1980 market)	
	Choice Steer, 500 lbs at \$.80	\$400.00
	Pasture & other costs	47.18
	Interst on operating capital (12% X \$213)	25.56
	Total Costs	\$472.74
III.	Net Income Return	32.18
	to Labor & Mgmt. (@ 1 hr labor/steer)	32.18 per hr.
IV.	Breakeven selling price	\$ 65.00 cwt.
V.	Net return = 15% on operating capital	

B-11: Full Feed Steer Calf; 425 lbs. to 1,075 lbs; gain 650 lbs in 11 months.

I.	Receipts (hedged on Fall futures 1980)	
	Steer at 1075 lbs. @ \$.70	\$737.45
	(less 2% death loss)	
II.	Total costs	
	Steer calf @ 425 lbs. @ \$.95 (prurchased fall 1979)	\$403.75
	Feed and other operating costs	212.35
	Building & Equip. cost (\$210 X 15%)	31.50
	Interest on operating capital (12% X \$436)	52.32
	Total Costs	\$699.92
III.	Net Income Return	37.53
	to Labor & Mgmt. @ 7 hrs. labor	5.36 per hr.
IV.	Break even selling price	\$ 65.10 cwt.
V.	Net return = 8.6% on operating capital	

S-21: Ewe and Lambs; sell 130% lamb crop in July as market lambs, 20% replacement Ewes purchased, 2% death loss on lambs.

I.	Receipts	
	Lamb .95 cwt X 1.3 X \$71.00	\$ 87.69
	18% Cull Ewe--Wool & incentive payments	15.49
	Gross Sales	\$ 103.18
II.	Total Costs	
	Buy Replacement Ewe (20% X \$120)	24.00
	Feed and other operating costs	48.00
	Building and Equip. cost (\$30 X 15%)	4.50
	Interest on operating capital (\$103 X 12%)	12.36
	Total Costs	\$ 88.86
III.	Net income return to Labor & mgmt.	14.32
	at 3.5 hrs. labor	4.09 per hr.
IV.	Break even selling price	\$ 60.00 cwt.
V.	net return - 13.9% on operating capital	

H-29: Cost & Returns, Sow; 2 litters, raise and finish pigs, one saved for for replacement, 2 years market average of 17.5 butchers at 225 lbs. (9 pig litter average)

I.	Receipts (average for 1979 market year)	
	Butcher hogs , 17.5 X 225 lbs. @ \$.40	\$1,575.00
	Cull Sow, .5 X 550 lbs. @ \$.32	88.00
	(less 2.5 % death loss)	-2.20
	Gross Sales	\$1,660.80
II.	Total Costs	
	Feed costs & other costs	1,000.75
	Building & Equip. costs (\$1000 X 17%)	170.00
	Interest on operating capital (12% X \$550)	66.00
	Total Costs	\$1,236.00
III.	Net Income per Sow	\$ 424.80
	To labor and Mgmt. @ 30 hrs./per Sow	14.16 per hr.
IV.	Break even selling price (at \$40 cwt.)	29.21 cwt.
V.	Net return =77.2% on operating capital	

H-29: Cost & Returns, Sow; 2 litters, raise and finish pigs, one saved for replacement, 2 years market average of 17.5 butchers at 225 lbs. (9 pig litter average)

I.	Receipts (based on price cut. March 25, 1980)	
	Butcher hogs, 17.5 X 225 lbs @ \$.35	\$1,378.13
	Cull Sow, .5 X 550 lbs @ \$.32	88.00
	(less 2.5 % death loss	- 2.20
	Gross Sales	<u>\$1,463.93</u>
II.	Total Costs	
	Feed costs & other costs	\$1000.75
	Building & Equip. costs (\$1000 X 17%)	170.00
	Interest on operating capital (12% X 550)	66.00
	Total Costs	<u>\$1236.00</u>
III.	Net Income per Sow	\$ 227.93
	To Labor and Mgmt. @ 30 hrs. labor per Sow	7.60 per hr.
IV	Break even selling price	\$ 29.21 cwt.
V.	Net return = 41.4% on operating capital	

H-30: Cost & returns per Sow; producing feeder pigs, one pig saved for replacement every 2 years. Market average of 18.5 feeder pigs at 40 lbs.

I	Receipts (Average 1979 per pig)	
	Feeder pigs, 18.5 pigs @ \$35	\$ 647.50
	Cull Sow, .5 X 5.5 cwt. @ \$32	88.00
	(less 2.5% death loss	- 2.20
	Gross Sales	<u>\$ 733.30</u>
II.	Total Costs	
	Feed & other costs	\$ 352.95
	Building & Equip. costs (\$600 X 17%)	102.00
	Interest on operating capital (12% X \$300)	36.00
	Total Costs	<u>\$ 490.95</u>
III.	Net income return per Sow	\$ 242.35
	To Labor & Mgmt. @ 26 hrs. labor	9.32 per hr.
IV.	Break even selling price per feeder pig	\$ 21.90
V.	Net return = 80.8% on operating capital	

D-35: Dairy Cow; 12500 lbs. milk sold per cow, replacements purchased

I.	Receipts	
	Milk, 125 cwt @ \$11.00	\$1,375.00
	Sale of calf (\$100) & cull cow (25% X \$700)	275.00
	Gross Sales	\$1,650.00
II.	Total Costs	
	Cow replacement (25% X 1200)	300.00
	Feed & other operating costs	503.10
	Building & Equip. costs (\$1200 X 17%)	204.00
	Interest on operating capital (12% X \$1350)	162.00
	Total Costs	\$1,169.10
III.	Net income return	480.90
	To labor & mgmt. @ 60 hrs. labor	8.02 per hr.
IV.	Break even price on milk	\$ 7.15 cwt.
V.	Net return = 35.6% on operating capital	

Members attending the 10 Step planning meetings are made aware of the Beef Cow cycle (shown in Chart 2) that has occurred about every 10 years. The Beef Cow cycle is longer than memory and the price break in 1974 will likely repeat itself sometime during the mid-nineteen eighties if history repeats itself.

A part of the 10 Step Planning meetings is devoted to the "Dirty 5" costs to own machinery and buildings shown in Chart 3.

A young farm operator can quickly become acquainted with the annual costs to own machinery and buildings by determining his own depreciation, interest, repair, taxes and insurance costs.

The following formula will determine if he can justify buying a new machine.

Example: $\frac{\text{Combine @ \$50,000 X 20\% = \$10,000}}{\$14.00 \text{ Custom rate/acre} - \$4/\text{operating cost/acre}} = 1000$ Break even acres needed to justify machine purchase.

Also realizing the annual cost of owning buildings will help a young operator become a better farm manager in determining the expansion in a livestock enterprise needed to pay for the added building investment and annual costs of ownership.

In South Dakota there are approximately $2\frac{1}{2}$ full time Extension Farm Management field staff members working directly with spring farm and ranch operators.

Actual assistance in farm planning is provided through the 10 Step Program developed and directed by Dr. Wallace Aanderud, Extension Farm Management Economist located at South Dakota State University.

The program consists of 3 day workshops with farm operators in most of the counties organized each year by the county agents, working directly with the Farm Management Specialist. Eight hundred to one thousand farm operators attend the 10 Step Farm Planning sessions each year. The Specialists provide additional assistance through farm visits and analysis of farm plan alternatives through the AGNET program with about $\frac{1}{3}$ of the operators, who request additional help, after they have completed the 10 Step farm planning meetings.

CHART NO. 2

IN LAST 100 years
9 cycles

BEEF COW CYCLE
10 years

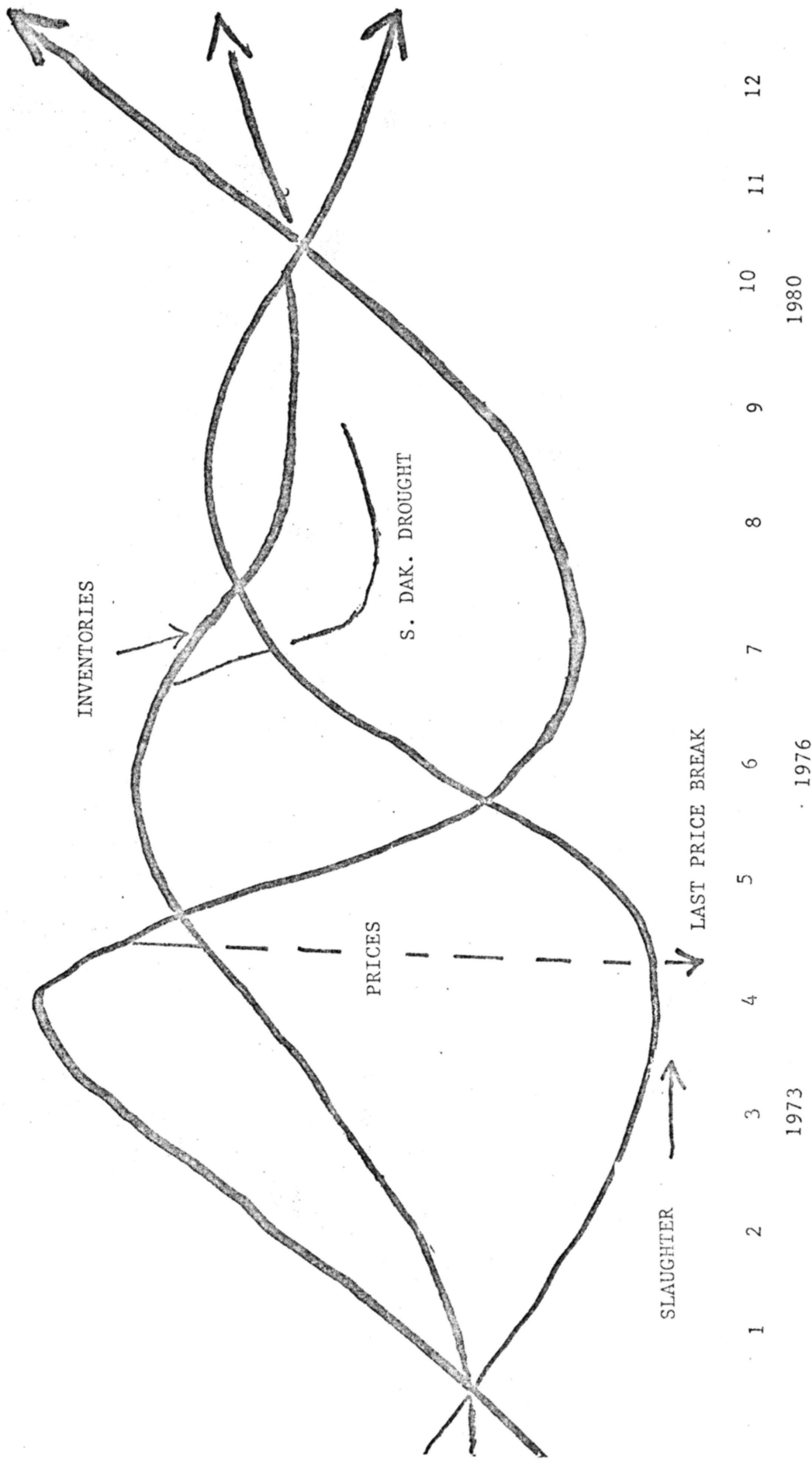


CHART NO. 3

Annual Costs
to own Machinery and Buildings

	<i>D</i> Depreciation	<i>I</i> Interest	<i>R</i> Repairs	<i>T</i> Taxes	<i>I</i> Insurance	
Machinery (10 yrs)	10	7	3	-	-	=20%
Buildings:						
Hog & Dairy (20 yrs)	5	7	3	1.5	.5	=17%
Beef Storage Machine Shed (33 yrs.)	3	7	3	1.5	.5	=15%

Farm records show an average increase in net farm income of over \$5000 per year for operators completing the 10 Step workshops. This translates into an increase in annual net farm income of about 4 million dollars with a cost benefit return of about 1-60. One cooperator reported the ability to analyze his operation utilizing the 10 Step Program actually earned him \$30,000 additional income in one year.

In South Dakota, we may be described as trying to plow a mile wide and an inch deep when compared to what other states are doing to help young farm operators in the area of farm management.

The state of Kansas in 1979 operated 6 farm management associations with a total of 3816 farm members participating, serviced by 24 fieldmen.

Each fieldman is responsible for serving an average of 159 farm operators encompassing an average of 4.3 counties. Farm management services are provided continuously to the members over several years. This compares to the lack of association membership in South Dakota where each Farm Management Specialist works with nearly 400 operators each year through the 10 Step Program covering more than 20 counties.

The success young farm operators experience in the nineteen eighties in becoming viable farm operators may be directly depended upon the expertise and help provided to them through Farm Management educational programs and services provided by their Farm Management Association fieldman.

"Times are tough...how can I tighten my belt so I don't lose my britches?"

1. "SIT TIGHT"
 - a) Delay Big Purchases
 - b) Wait for Improvements in Crop and Livestock Prices
2. CONSOLIDATE YOUR BORROWING
 - a) Fewer Credit Sources Mean Fewer Credit Problems.
3. RE-EXAMINE YOUR GOALS
 - a) Do You Want To Be The Biggest Operator In The County or Are You About The Right Size Now?
 - b) Do You Want To Specialize or Diversify?
 - c) How Many Years Before Retirement?
4. ISOLATE YOUR PROBLEMS
 - a) Production Management or Financial Management?
 - b) Are All Your Operating Costs Justifiable?
 - c) Does Your Added Investment Have The Prospect of Increasing Income?
5. WHEN YOU NEED HELP.....FAST
 - a) Refinance Your Debt
 - 1) Stretch Out Repayment Periods
 - b) Use Your Assets
 - 1) Providing Additional Collateral
6. KEEPING OUT OF TROUBLE
 - a) Avoid Making "Snap" Buying Decisions
 - b) "Get Tough" About Expenditures
 - c) Base All Major Decisions on 5-year Average Prices

MANAGEMENT ALTERNATIVES FOR LOW RESOURCE FARMERS

by
Herbert R. Allen

Identification of the management alternatives available to low resource farmers is not an easy task. The list certainly includes all of those given by previous speakers. However, as we move into the nineteen eighties, problems facing the low resource farmer, while similar in nature, may become more acute relative to those of most commercial operators.

I grew up on a low resource farm. Perhaps many of you did too. As a matter of fact, some of my fondest memories go back to the "good old days" in the thirties while growing up on an Iowa farm. If you enjoy history and like to reminisce you may find it interesting to read old farm management texts. The following quote is from a text titled "Farm Management" and written by G.F. Warren, Professor of Farm Management, Cornell University in 1913, page 36-37.

"In Tompkins County, New York, the United States Census includes as farms about 500 small places occupied by persons who have some business other than farming. Many large farms are occupied in the same way. This county is not near any large city. It is 250 miles from New York -- Besides the small places there were 42 farms among 983 that were occupied by persons whose chief business was something other than farming.---The average size of the 42 farms was 80 acres. Some of the owners worked on their farms nights and mornings. Most of them worked during their vacations and other spare time. This time averaged 1/4 of the year."

The quote is interesting because of his reference to about 500 farms out of 983 as "small places" and the fact that they averaged 80 acres in size. The "small places" in South Dakota in 1980 are the object of my discussion this morning. We have referred to them as low resource farms or sometimes called small scale farms. I prefer the concept of small scale farming myself. There is no one best definition for a small scale farm because it can and should be defined to meet the purposes of the person (or entity) who created the definition.

The current USDA definition is based on the following factors:

- (a) Family net income from all sources (farm and nonfarm) is below the median nonmetropolitan income of the state.
- (b) The family is dependent on farming for a significant, though not necessarily a majority, of their income.
- (c) Family members provide most of the labor and management.

It is estimated that 1 to 1.3 million farms in the United States fall within this definition. The median nonmetropolitan income in 1977 was \$13,800.

One may also identify small scale farms merely by defining them as any farm below average in terms of acres in the farm. This is just as useful and much more practical. After all, there is no clear cut break between a big farm and a small farm. My purpose at this point is only to roughly describe the number of farms involved when we talk about "low resource" or "small scale" farms.

Table 1 presents data on number of farms by size group in crop reporting district number 9. The average size farm in this area of South Dakota is 380 acres. If we identify a small scale farm as any farm below 260 acres in size we find that this will involve 3,718 farms in the 9 county area of Southeastern South Dakota. This comprises 42 percent of the farms in the area.

Table 1. Number of Farms by Size Group.

Crop and Livestock Reporting District Number 9

<u>Acres</u>	<u>No. of Farms</u>	<u>Percent of Farms</u>
1-100	1,426	16
101-179	1,211	14
180-259	1,081	12
260-499	3,052	34
500-999	1,767	20
1,000+	360	4
TOTAL	8,897	100
Average size = 380 acres		

1974 Census of Ag.; Bon Homme, Charles Mix, Clay, Douglas, Hutchinson, Lincoln, Yankton, Union and Turner Counties.

It is also possible to get an account of the number of farms involved if we look at income data for farms in South Dakota. Data from the 1974 Census of Agriculture, presented in table 2, shows that 29% of the farms produced 69.66% of the total product. This means that there were 30,365 farms (71%) producing only 30.34 percent of the total product. Using this breakdown as a criterion we could say that small scale farming involves all those farms with gross sales below \$40,000. This involves roughly 70% of the farms in the state. So, depending upon how one wishes to cut the cake we can say that low resource farming involves anywhere from about 40 percent to 79 percent of the farms in the state of South Dakota.

Table 2. Value of Agricultural Products Sold Off Farm

<u>Sales Class</u>	<u>No. of Farms</u>	<u>Percent of Total Product</u>
above \$40,000	12,384 (29%)	69.66
under \$40,000	30,365 (71%)	30.34
TOTAL	42,749	100.00

Source: 1974 Census of Agriculture.

Further, in terms of the structure and organization of these farms we can say that it includes all kinds and types of farms. Low resource farms include young beginning farmers on the way up. It includes older farmers near retirement. It includes those who choose to remain small because of the particular life style that it offers, and it includes those whose chief business is other than farming.

Now the question--what management alternatives are available to low resource farmers? To help answer this question I would like to present what I refer to as "character sketches" of some representative low resource farms. These sketches are taken from some early responses to a survey currently being conducted.

Family of 5 Age 33
\$73,000 in debt
200 acres of cropland, rented
400 acres of pasture, rented
100 beef cows
\$40,000 in machinery
Present income: NOT adequate (\$8000)
Aiming for \$30,000 to \$40,000
Off Farm Income: none

Farm no. 2

Family of 3 Age 23
\$113,000 in debt
90 acres cropland, owned
60 acres pasture, owned
6 beef cows, 12 dairy, 15 litters
No machinery: Exchange labor
Present income: Adequate (\$8,000)
Off farm income: \$250
Aiming for \$20,000 - \$25,000

Farm no. 3

Family of 3 Age 27
\$65,000 in debt
390 acres cropland, rented
42 litters of hogs
\$65,000 in machinery
Present income: Adequate (\$12,000)
Aiming \$15,000 to \$20,000
Off farm income: \$1,000

After reviewing these sketches my first question would be - are the alternatives available to these three farmers the same? Obviously not. Farm number 1, for example, might consider expansion or diversification in the livestock program. Of course, it must be understood that it would be facetious on my part to look at this much information and say what this particular farmer should do or ought to do. But the information in a sketch such as this is enough to open the doors to some considerations and to raise questions as to alternatives that might be considered. Farmer number 1 has an inadequate level of income which, according to his definition, would be under \$8,000. Production efficiency might be examined in this case along with expanded livestock production such as backgrounding and summer grazing cattle, fattening calves or swine production.

Farmer number 2 is obviously just getting started. It may be that the most realistic alternative for this farmer is to find part time work off the farm. This situation raises many questions as to his alternatives. If off farm work were to be sought should he discontinue dairy? Dairy may not be compatible with off farm employment. However, if this young person is seeking to grow into the dairy business the answer to eliminating the dairy herd is "no." He is certainly in a credit crunch. It is not likely that he will be able to obtain much more credit for expansion. But expansion in livestock is a direction he will need to go. Should he endeavor to purchase a line of used machinery or should he exploit his present situation as long as possible? If he did not furnish labor in exchange

for machinery use he may be able to use his own labor in productive ways on his own farm.

As this young farmer plans ahead and considers these many alternatives he will want and need information on expected costs and returns, production practices, improved facilities and methods all pertinent to low investment type operations. We have the knowledge and information but it is necessary, through research and Extension, to adapt it to special conditions of small scale farming. Linear programming is a planning tool that would be most useful in this situation. At the present time we could sit down with farmer number 2 and develop an LP matrix that would be pertinent to his situation and use it to help investigate some of the questions that were raised. However, it would be time consuming and complicated. Much work can be done in terms of simplification of our decision making tools. The micro computer is another example of this. The computer is fast becoming another "machine" to be used on the family farm. It can simplify many of the decision making procedures that rely on large quantities of data and complicated mathematical procedures. But not until the research for development of the necessary software is completed. A study currently under way in the Economics Department is aimed at modifying linear programming procedures to simplify them and adapt them to small scale farming conditions.

Farm number 3 is in a resource situation somewhat improved over farm number 2. The income is stated to be adequate and off farm work is contributing to this. Many farmers are interested in maintaining a situation of this kind. One response in the survey stated that they wanted more help in management of resources rather than growth and expansion.

The management alternatives available to low resource farmers may be summarized briefly as follows: First, it is important to recognize that the available alternatives are unique to each family, its resources, goals and values. Secondly, the alternatives include enterprise selection and adjustment in terms of size, organization and efficiency. The selection of enterprises in many small scale operations will include specialty products such as vegetable crops, geese, mink, mushrooms, sweet corn, etc. Third, the use of labor intensive practices may become a more realistic alternative as we move into a time of high energy costs and economic conditions that discourage large capital investments. Fourth, it will become increasingly important to sharpen management know-how through the adoption and use of traditional management tools. This includes forward planning (budgeting) and evaluation (farm records).

Low resource farmers will need assistance in all of these areas. Many farm operators may not be aware of all their opportunities nor possess the skills to implement the management tools that I mentioned. During the 1980's programs of education and research must be implemented to meet the unique needs of small scale as well as large scale farmers.¹

The rationale for assistance to low resource farmers is not to significantly affect the food supply or to alter the number of farms producing most of this nation's food and fibers.¹ Rather, it may be stated in the words of the ad hoc committee on small farms of the Joint Council on Food and Agricultural Sciences. This ad hoc committee in a recent report¹ stated that the rationale for assistance rests on four considerations:

1. All farmers, regardless of farm size, should be in a position to benefit from the agricultural science and education system.

2. An agricultural system that permits small farms provides the opportunity for persons to choose small-scale farming or to combine farming with off-farm employment as a life style.
3. Assistance to small-scale farmers will promote better management and more effective use of a significant body of the Nation's natural resources.
4. Simple humanity requires attention be given to those whose needs are greatest, and human dignity dictates that effort be expended to assist low-income small-scale farmers to raise their income.

Report of the Ad Hoc Committee on Small Farms of the Joint Council on Food and Agricultural Sciences, Research, Extension and Higher Education For Small Farms, December, 1979. Available from: Executive Secretary, Joint Council on Food and Agricultural Sciences, USDA, Room 351-A, Administration Building, 14th and Independence SW, Washington, D.C. 20250.

DALE BORCHARD

AGRI-BUSINESS PERSON OF THE YEAR
1980

Presented by Dr. John E. Thompson
Head, Economics Department, SDSU

Mr. Dale Borchard, president and general manager of Dakota Hatchery & Mill, Redfield, is our Honored Agri-Business Person of The Year. He heads a business which grosses about \$3 million per year and supports 40 local jobs with a payroll of some \$375,000.

Mr. Borchard, a 1948 Redfield high school graduate, interrupted his college education at South Dakota State University for two years of active service in the U.S. Army but returned to take his degree in Agriculture in 1955, majoring in Poultry and Economics.

He was owner-manager of Dakota Hatchery at Clark, S.D., from March, 1955 to October, 1959, before returning to Redfield as vice president and assistant manager of the business there.

In August, 1966, he was named president and general manager of the family enterprise, first begun as a chick hatchery by his parents in 1938.

The company has two divisions. The retail division includes production and marketing of their own feed, "Dakota Best." The company mill, built in 1958, is capable of pelleting, mixing, and grinding, and has a capacity of about 100 tons of mixed feed per 10-hour day.

The retail division also includes the sale and construction of grain bins, drying bins, and steel buildings. The company is just now getting into confinement systems for livestock. Their retails include baby chicks, started pullets, seed, and livestock equipment.

A second division produces table eggs at the company's layer complex. The complex has ten houses with a capacity for 215,000 layers. Production exceeds 3.5 million dozen eggs per year. The complex also includes facilities for growing all pullet replacements.

Dale presently serves on the board of the South Dakota Chamber of Commerce and is past president of the Redfield Chamber of Commerce. He also serves on the Advisory Committee to the College of Agriculture at South Dakota State University and is a member of the Kiwanis Club.

He also is active in his church, having served as secretary, elder, and Sunday school teacher of Messiah Lutheran in Redfield. He served as a delegate

to the South Dakota District of Synodical Conventions of the Lutheran Church, Missouri Synod, is a member of the Parish Services Commission, and is chairman of his local congregation.

Dale and his wife, Evelyn, are parents of two sons and a daughter. Greg, 21, is a senior, and Connie, 19, a sophomore at SDSU, and David, 18, is a freshman at Concordia College in Moorhead, Minnesota. Mrs. Borchard also is a SDSU graduate, class of 1957.

COMMENTS BY DALE BORCHARD
HONORED AGRI-BUSINESS PERSON OF THE YEAR

Thank you for the honor and privilege of being here.

We have many things to be thankful for these days. We can be thankful for the freedoms we have in this country--the greatest and best country on earth to live in at this time. Just think, I could stand up here and criticize the President, any of our Congressman, our Governor, any of our elected or appointed officials. No one would think anything about it. And I wouldn't end up in jail or Siberia, either. We have this privilege and freedom, but do we average citizens use it as we should?

We have the gigantic problem of INFLATION (almost 20%). Everyone is talking about it. What is it? I think it means today's dollar will be worth 80¢ by next year.

Why do we have inflation? Unbalanced federal budgets or deficit spending; the high price of oil; the wage-price spiral; and others have been mentioned. In my opinion, unbalanced federal budgets and deficit spending are the biggest causes. Then Washington prints more money. But, you and I are partly responsible for inflation because we let it happen. We all have some Federal Program we don't want stopped.

What can you or I do about INFLATION? I think we must do three things:

1. We need to elect the right senators and representatives to Congress; Congressmen who understand what we want.
2. We must write and call our Congressmen week after week all year long to remind them that we haven't changed our mind. It does make a difference when the people speak up. The last two years Congress has reacted to letters and phone calls from informed citizens and small businessmen from all over these United States and some very bad bills were killed in spite of strong lobbies which favored them. So you and I can help solve inflation--one of our country's worst problems--by writing and phoning our Congressmen.
3. We must be willing to accept less total Federal Dollars for some of our favorite projects or programs.

If we will (1) elect the right people; (2) keep writing and calling our Congressmen after they get elected; and (3) be willing to take less Federal Dollars as the budget is balanced -- We Can Stop Inflation!

AGRICULTURE OUTLOOK FOR 1980
Agri-Business Day March 25
Brookings, S.D.

Arthur B. Sogn
Extension and Research Economist
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Brookings, S.D.

In 1968, the first year I was with South Dakota State University, we developed a slide presentation called Agriculture Year 2000. Leonard Benning and I with help from colleague's around the country thought we had some fantastic ideas for the year 2000. They were great ideas--the reason for mentioning it is that these ideas didn't wait for the year 2000--many of them happened already. So based on our past--how can we predict what might, or is apt to occur in the next decade in agriculture? There are some things I feel are very likely to occur based on the current conditions from which we must make these judgements.

Most of the activity I want to discuss will be centered around grain related agriculture, including crop production, marketing and price. My life has been centered in this area for some 50 years, and I'm sure it is an area of interest for all of us here today.

Two years ago five major problem areas in grain marketing were identified by a national extension task force. These areas are:

1. Low grain prices relative to the cost of production for that grain.
2. Instability of grain prices.
3. Inefficient grain marketing and transportation systems.
4. Inadequate market information and primary distribution of market news.
5. Imperfect competition in the grain industry.

1. Low grain prices relative to the cost of production.

Grain price will go up from this level probably to 1973-74 levels by the mid 80's, but cost of production will go up too. However, producers have, and can continue to operate profitably, if they will become students of the factors that determine price. If they will learn about supply and demand, and if they will learn to use the alternative marketing tools now in existence, and if they will recognize and accept a price that offers them a profit, then most of agriculture can prosper in the 80's. Understanding and, yes, using futures when they are the best alternative for the time and situation will become increasingly important in grain marketing.

2. Unstable prices are a problem for many, but they are an opportunity for others. Most who understand carryover supplies and its relationship to price can plant a crop where supplies are not burdensome. Producing more of a commodity to compensate for low prices is not the answer.

3. The inadequacies of our transportation is currently costing South Dakota grain producers millions of dollars per year. We have one of the lowest prices for feed grains in the nation. Our basis, that is the amount our cash

grain is under the futures price, is the most it has ever been. The average price received by farmers in the U.S. for corn last year was \$2.40 per bushel. I don't know what the average price to South Dakota producers was, but I don't believe it would exceed \$1.90 per bushel.

Some of this disparity with other parts of the country is our distance to markets, to rivers, or our poor access to the west coast, the fastest growing market area. However, much of the price difference is because of our inability to use hopper cars because of our poor tracks (Chicago often discounts box cars 4 to 6 cents a bushel) and the instability in availability of rail transportation. Buyers and sellers alike increase margins because they do not know what truck transportation will cost when rail isn't available. We must improve our transportation. Producers and country elevator managers must learn to use the markets to pay them for storage when there is no transportation.

4. Any inadequacy of market news can be remedied as soon as producers put a high priority on wanting to receive it and learning to use it. They must convince, in order, themselves, the law makers, the educators and the farm service companies of the importance of receiving this information as soon as it is released, and in learning the implications of that news.

The world crop information will be much more accurate in the 80's because of a greater use of satellites. We will, I hope learn to produce for a market and not just grow a crop and hope for a market.

5. Imperfect competition or the lack of alternative buyers is not a valid problem in my opinion. We have the right to sell to whoever will give us the best price and we have many alternative ways to market grain if we will learn of them and learn to use them. We have customers all over the world who are increasing their purchases 5 percent per year.

If then we can improve on the mentioned problem areas so perhaps we won't have the lowest prices in the country, then what can we expect for the 80's?

With no effort to rank or list in any order, the following are what I think the 80's will either start or complete for us:

- I expect we will experience a growth of world trade of more than 3 percent per year in oil seeds and even slightly more in feed grains.

- Based on trends already established we will probably see about a 1.5 percent growth in world trade of wheat (unless energy cost take so much of family income that bread becomes a greater part of family diets).

- The balance between world demand and supply will be at a delicate balance and because of the inconsistency of weather, the world market will remain volatile. Odds are good that world consumption will exceed production in most of the years in 1980.

- The world will probably have enough food but again distribution of that food will be poor. Many developing countries will be short of food. If there is any over-all shortage of food, and if price and demand dictate it, about 370 million acres of land in North and South America can be put into crop production.

•1980 will be the worst year agriculture will have in the 1980's--and 1980 will be a very difficult year. The 1980's in total will be looked upon as a good decade for agriculture--a decade in which we find a better balance between supply and demand.

•U.S. will become the world largest producer of sunflowers in the 80's as well as continuing as the largest exporter of seed. Growth for domestic use of sunflowers will exceed the growth of whole seed exports by a substantial margin in the 1980's.

•We are apt to see sunflowers as a regular part of a wheat-sunflower-fallow rotation over much of the South Dakota winter wheat area. Sunflower production will continue to grow but at a much slower rate.

•Several crops will grow in acreage and in use as alternate crops to our traditional crops. Dry bean acreage will increase, rape seed will gain prominence as an oil seed in the midwest.

•I believe the 1980's will see an increase in forage crops and legumes, and that they will become an important cash crop as well as a feed. They may have a resurgence as a source of nitrogen as petroleum based fertilizers become uneconomical to use in recommended amounts. Conservation of our precious resource, the soil, will once again become a thrust of national policy.

•We could see Russia back as a major customer as both the United States and Russia change leadership.

•China will become a better customer of U.S. farm products, but will not become the customer some people believe because of China's resolution to vastly improve her own production.

•We may discover to our surprise that Mexico is our largest agricultural commodity customer, and she may be the main reason for increase in price and demand for feed grains--sorghum in particular. Mexico could also become a good cash-paying customer for sunoil and dry beans.

•Farm technology and production will not increase as much as demand because people have not recognized or been willing to fully support the major source of increased productivity. Namely--research and extension. We do not know enough today to significantly increase our food production in the 80's. A recent study by Evenson, Waggoner and Ruttan reported that the benefits accruing to agriculture research average 50 percent return on investment. The U.S. exports 55 percent of the wheat in world trade. We will lose that proportion if we fail to support the search for improved farm technology.

•Marketing will begin to assume its rightful place as a highly important element of farm profitability. Producers will either learn marketing, or hire someone to do it. They will most certainly insist their elevator managers understand the various marketing alternatives and how to apply them. Many more producers will begin talking and trading basis in the 80's. Nearly all the grain as it leaves the country elevator is traded on basis. Producers will finally join so they can become better marketers. They will be charting their basis each week with a computer.

- There will be some cooperative and independent fast grain loadout elevators developed in South Dakota. There will also be oil seed crushing plants, alcohol plants and more feed lots.

- People will come to the realization that low raw product prices in relation to finished product rates are a major incentive to ship the raw product out and to not process locally. If this is adjusted, feeding will return to South Dakota and farm-related processing will begin.

- Corn will continue to be king even though upstart soybeans caught up with it in planted acres in 1979. New uses (corn sugar, and alcohol namely) will increase domestic use of corn.

- I think oats production will continue to decrease, and it may well go to contract growing. A little further reduction in production will permit oats to divorce from other feed grains in price; and command a considerably higher price per hundredweight.

- Sorghum acreages will grow as its value in relation to corn becomes better known.

- Flax seed may also go to contract growing so as to fill a pre-determined market. Flax may have a surprising resurgence if petroleum prices continue upward at a rapid price. Flax may recapture some of the markets it once lost because of price differential.

- The next decade is when we learn about the metric system whether we like it or not, and I think we will like it. The sunflower trade is partially metric now. We export 70 percent of our sunflower production, and all our foreign buyers trade in metric. Perhaps some of you have noticed, some of the processed products of corn, rye and barley have already gone metric. I'm talking about the liquor industry of course. The Winnipeg prices are all in metric tons. Most producers cannot now compare our domestic prices with world prices unless they are converted to dollars per bushel.

- The quest to lower the cost of production has about reached its limit with present technology. Higher grain prices must be a goal for the 80's.

- Many, and yes, most producers will finally learn to understand and use grain futures, and when they do they will be able to use them back as a guide and a tool in marketing:

- ▣ By understanding and differentiating old and new crop futures, you can better decide which crop might be the highest priced in the fall, and plant accordingly.

- ▣ By understanding carrying charges and deferred futures, you can better decide whether to sell or store, and how long to store.

- ▣ By understanding new crop futures, you can estimate the value of next year's crop and sell at a satisfactory price before the crop is planted, or grown or harvested.

☐ Understanding futures can aid you in assessing your own local price, and help determine whether a strong local market is temporary.

☐ An understanding of both livestock and grain futures can aid you in deciding whether to feed livestock or sell cash grain.

☐ Understanding grain futures is important in making all decisions as to the marketing of cash grain because of the normal predictable relationships between the two markets.

• It's probable we will produce less grain in the 80's than we did the last years of the 70's and we will make more money doing it.

• The first couple of years in the 80's will be difficult but they will set the stage for a prosperous mid and late 80's for agriculture.

I am bullish on agriculture!

I am convinced we have the best system in the world if we will learn to use it. It has an alternative for everyone.

I am convinced that learning to understand and use the marketing tools now available will add more to farm profitability than a 10 percent increase in production at this time.

A very happy and prosperous decade to all!

LIVESTOCK MARKETING IN THE 1980's - AN OVERVIEW
 Agri-Business Day, S.D.S.U.
 March 25, 1980

Gene E. Murra
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Many factors, some probably not yet known or suspected, will affect livestock marketing in the coming decade. Currently, however, three factors are leading candidates for the award which will go to one which has the greatest impact. These factors are:

- (1) Inflation and the general state of the economy
- (2) Foreign trade
- (3) Changes in production

Inflation and the Economy

Most estimates of economic conditions expected in this country in the 1980's include a strong note of pessimism. Specifically, a high rate of inflation along with somewhat depressed conditions in many sectors of the economy are included somewhere in most forecasts. If, in fact, the coming decade has the conditions noted above, what does it mean to the livestock sector in general and to livestock marketing in particular? Three areas where the impact will be felt are noted.

Consumer Demand - As prices of both food and non-food items increase, often at a rate greater than increases in income, consumers will make some changes in their spending patterns. Specifically, when related to livestock and meat, some shifting to less expensive meats or to non-meat sources of protein will occur. Currently, this is reflected in larger purchases of pork and poultry and smaller purchases of beef. Consumers will eat fewer meals away from home. This will affect beef more than other meats. And, consumers will travel less, meaning fewer meals "on the road." Once again, beef consumption will be affected more than other meats.

In general, the impact of inflation and depressed conditions in the economy will be negative on the livestock industry. The negative impact will affect beef more than other meats.

Interest Rates - Higher costs for borrowed funds (or the opportunity cost for invested funds) will play a big role in livestock producers' decisions. Historically, marketing decisions which involved the delay in the sale of animals could be made without much emphasis on the interest costs associated with that delay. Now, with interest rates at a minimum of 15 percent and some

quotes in the 20 percent and above area, this must be given more consideration. For example, if the interest rate is 18 percent, a \$100 investment for one month will cost \$1.50. Or, a \$500 animal held for one more month will have \$7.50 in interest costs.

When one considers that the supply of borrowed funds also may be limited, it is easy to see that marketing and production decisions must consider the capital (money) aspects. Decisions which once were made by the producer now may be made jointly by the producer and his lending agency.

Energy Costs - Although increases in all energy will affect the livestock industry, increased gas and diesel fuel prices probably will have the most noticeable impact. Producers will have to give greater consideration to the costs involved in moving livestock to market. Where, in the past, long moves of live animals were not very costly, they now can be too costly to be considered by many producers, at least in the same way they once were.

Livestock production will be concentrated closer to areas of grain production. Livestock slaughter will be closer to livestock production and more "processing" will be done where slaughter takes place. All of the above are measures which should help reduce, or at least help control, transportation costs. Some already are underway; however, continued increases in transportation costs will accelerate them. Examples include the construction of slaughter plants near feedlots and greater use of boxed beef.

Foreign Trade

Although foreign trade has played a major role in the country's grain industry, it has not been a major factor for livestock at least not for exports. Whether it ever can be as important to livestock as it is to grain is questionable. However, there is great potential for growth.

Several reasons can be cited for optimism in the foreign trade area. Populations are growing in most countries and, in many areas, people are demanding higher quality diets, diets which include more meat. This country is one of the most likely suppliers of that meat. Japan and China appear to be willing to trade more. Even small per capita growths in meat consumption in those countries would mean large increases in total consumption. Once again, the U.S. is a likely source. Finally, greater emphasis on a favorable trade balance may help create new trade opportunities for exporting beef.

Changes in Production

Higher production costs in general and higher interest charges in particular will have an impact on production and, therefore, on marketing decisions. As production costs increase, producers will make greater use of marketing methods which involve forward pricing, probably the futures market or forward contracts. Higher interest rates will force producers to either produce more in a given time period or produce the same amount in a shorter time period. Emphasis will be in higher calving percentages, larger litter sizes, heavier weaning weights, faster rates of gain and any practice which increases the

turnover rate or sales volume in a given time span. Changes in the type and/or breed of animals produced will be noted.

Impact on South Dakota

What does all of the above mean to the South Dakota livestock producer? Higher interest rates and production costs will emphasize the need to coordinate production and marketing. Higher energy costs will cause greater attention to be placed on evaluating market outlets, especially with respect to their location. It is doubtful that the state will see an expansion of the slaughtering-processing industry. However, if local production of slaughter animals does increase, growth in the processing segments could follow.

Generally, the next decade looks like one where changes in the State's livestock industry will be similiar to changes in other parts of the country.

SMALL-TOWN VIABILITY AND HIGH ENERGY PRICES

Paper presented by

Thomas L. Dobbs
Associate Professor and Extension Economist

at
Eighteenth Agri-Business Day
Brookings, S.D.
March 25, 1980

The effects on small-town viability of increasing energy prices and other changing economic conditions in the 1980's will depend heavily on two things: (1) what happens to job development in South Dakota and (2) what people decide about where they want to live in relation both to jobs and to the services they want.

We witnessed two concurrent trends during the past decade in South Dakota: (1) a movement of jobs, particularly in the manufacturing sector, closer to rural and small town people and (2) a tendency of people to travel longer distances for services. The interstate highway system built during the 1960's helped facilitate both trends. The trends had somewhat opposite effects on small towns. Increased manufacturing employment in the State made it possible for many people to remain on farms and in smaller towns and commute to work, rather than migrate out of the State to obtain employment. However, the improved transportation system also made it easier to travel to the larger trade centers to obtain services, thus reducing trade in smaller towns.

Are increased energy costs, a deteriorating transportation system, a changing structure of agriculture, or other forces now facing our rural economy likely to alter these trends during the 1980's?^{1/}

A closer look at the trends

A closer look at recent trends and underlying forces may help us at least "ask the right questions" about what lies ahead.

1. Agricultural employment has continued to decline in South Dakota, going from 66,000 jobs in 1965 to around 43,000 in 1979 (Figure 1). High energy costs could slow the pace of mechanization, thus slowing the displacement of labor by capital in agriculture. However, high energy costs could also result in a less intensive agriculture in South Dakota than might otherwise have evolved. Irrigation development, in particular, is likely to be less important in South Dakota than many had hoped. The net result is hard to predict, but it seems unlikely we will see any significant increases in agricultural employment in South Dakota during the 1980's. Slight declines may, in fact, continue.

^{1/}The effects of potential "energy development", such as uranium development, on small towns in South Dakota are not addressed in this paper.

2. Non-agricultural wage and salary employment has shown reasonably good growth in South Dakota in recent years, increasing by 55% over the past 14 years (Figure 1). The non-manufacturing employment component increased by 34% during the decade of the 1970's (1970 to 1979), while manufacturing employment rose by 70%. Although manufacturing employment is only 11.2% of South Dakota's non-agriculture wage and salary employment (Table 1), the rate of increase during the 1970's was one of the highest in the nation.

3. An available work force has been one of South Dakota's big drawing cards for manufacturing over the past decade (Table 2). However, as the population ages and as the proportion of women not already in the work force declines, this particular type of manufacturing firm drawing power is likely to weaken. Eventually, many of the types of light manufacturing goods added to South Dakota's economy in recent years are likely to be produced in and imported from lower-wage foreign countries.

4. A second major manufacturing firm drawing card relevant to this discussion has been the State's highway transportation system (Table 2). A recent survey in our Economics Department found that rural manufacturing firms in South Dakota, on the average, use truck transport for 90% of the manufacturing materials tonnage they ship in (Table 3). They use truck transport for 91% of their manufactured product tonnage sent out from the plants (Table 4). Good transportation will remain important to South Dakota manufacturing. Whether higher cost transportation, as such, will help or hinder our ability to compete with other States for manufacturing and processing will depend on both the type and source of raw materials and the market destination in each case.

5. Increased energy costs are likely to make it even more difficult than in the past decade for smaller towns to compete with the State's larger trade centers as providers of private and public goods and services. In the short term, people may buy groceries and certain other goods and services at locations closer to home, including small towns when those are closest. Over time, however, the higher energy costs are likely to draw people increasingly to residences in the larger trade centers, where a wide range of goods and service providers are clustered, and away from smaller towns. This latter effect will occur gradually over time, and may be noticed more in the 1990's than in the 1980's.

Implications for policy and action

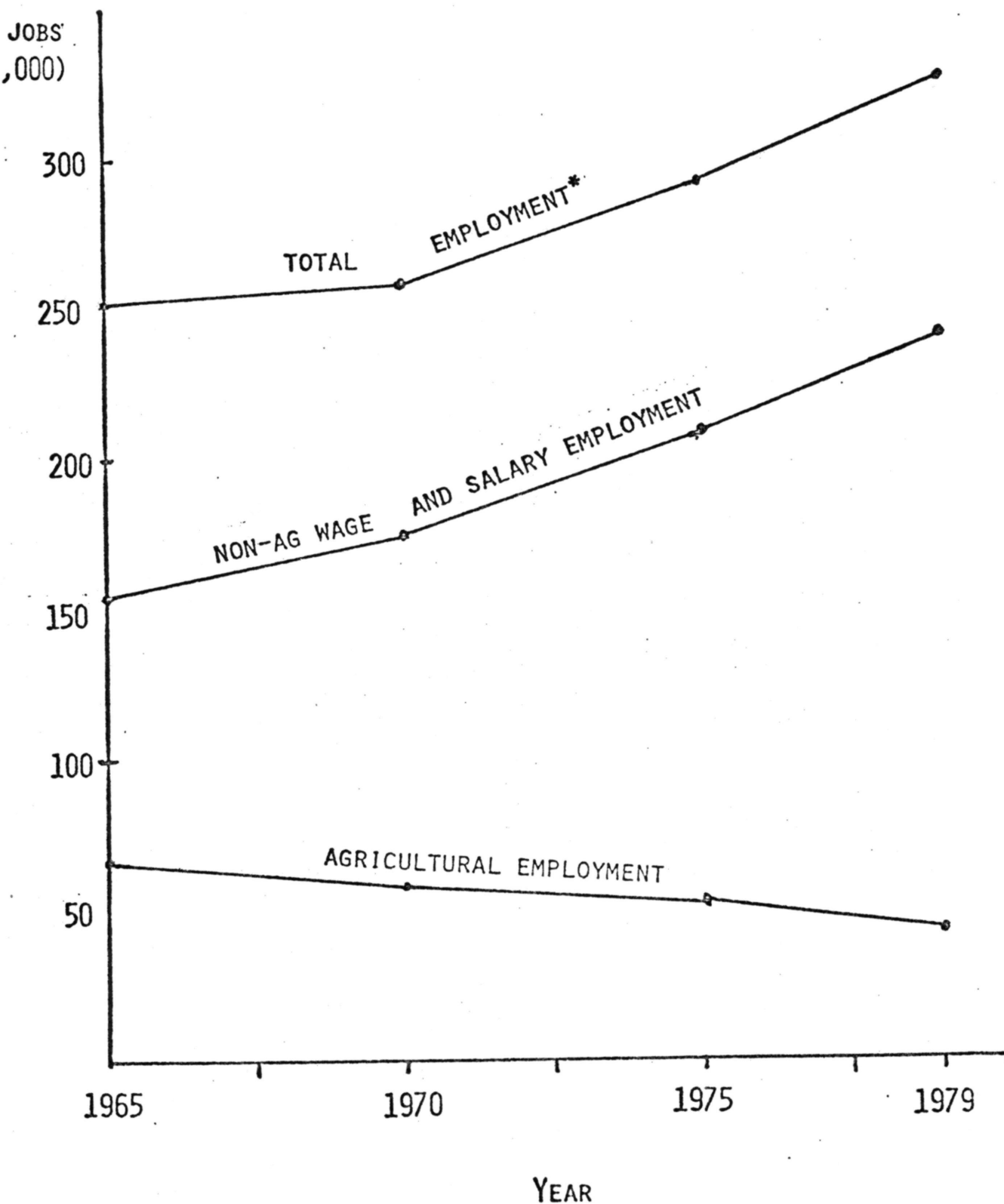
Some implications of my reading of this very fuzzy "crystal ball" are:

1. A transportation strategy which incorporates the emerging economic realities of high priced energy is absolutely critical. Decisions on potential economic viability of various size towns will be part of the decision milieu for transportation investments.

2. We need to identify those manufacturing and processing opportunities which rely on local, bulky raw materials. Processing closer to home, namely in South Dakota, can reduce bulk and, hence, overall transportation costs. However, milder climate states which have lower heat bills both for plants and workers' homes may be competing for some of the same industries.

3. Non-manufacturing possibilities must be actively pursued in South Dakota during the 1980's. Manufacturing employment is barely increasing nationwide. The ten industries expected to show the largest increase in number of jobs nationwide during the 1980's are all non-manufacturing types (Table 5). Can we take advantage of that expansion? To do so may require investments in a skilled work force and rapid communication and transportation systems. Unfortunately for smaller towns, these kinds of industries depend on facilities and linkages likely to be found only in larger towns.

FIGURE 1. SOUTH DAKOTA EMPLOYMENT TRENDS



*NOTE: "TOTAL" INCLUDES "AGRICULTURAL", "NON-AGRICULTURAL WAGE AND SALARY", AND "OTHER" EMPLOYMENT; IT ELIMINATES DOUBLE COUNTING DUE TO DUAL JOB HOLDERS.

TABLE 2. REASONS OWNER-MANAGERS GAVE FOR LOCATING MANUFACTURING FIRM IN SOUTH DAKOTA, IN ORDER OF IMPORTANCE

1. WAS HOME COMMUNITY OF OWNER
 2. ABUNDANT LABOR
 3. CLOSE TO MARKETS
 4. CLOSE TO RAW MATERIALS
 5. GOOD TRANSPORTATION
 6. QUALITY OF LIFE
 7. FAVORABLE TAX POLICY
 8. OTHER REASONS
 9. LOCAL FUNDS WERE AVAILABLE
 10. LOW LABOR COSTS
 11. LOW POWER COSTS
-

SOURCE: LOREN W. TAUER AND THOMAS E. DAVES, COMMERCIAL BANK FINANCING FOR INDUSTRIAL DEVELOPMENT, ECONOMICS DEPT., AGRICULTURAL EXPERIMENT STATION, S.D.S.U., BULLETIN 649, MARCH 1977.

TABLE 3. TRANSPORTATION METHODS USED BY S. DAK. MANUFACTURING FIRMS TO OBTAIN MATERIALS

	% OF TONNAGE GOING BY EACH METHOD: UNWEIGHTED AVERAGES				
	<u>TRUCK</u>	<u>RAIL</u>	<u>AIR</u>	<u>OTHER</u>	<u>TOTAL</u>
ALL MANUFACTURING FIRMS	90	5	1	4	100
<u>SELECTED TYPES:</u>					
FOOD PRODUCTS	92	6	2	0	100
LUMBER/WOOD PRODUCTS	83	13	1	3	100
APPAREL MANUF.	95	2	2	1	100
CHEMICAL PRODUCTS	61	24	-	15	100
ELECTRICAL MACH. & EQUIP.	99	--	1	--	100
MACHINERY, EXCEPT ELECTRICAL	95	4	-	1	100

Source: Sample survey in summer of 1979, by South Dakota State University Economics Dept., of manufacturing firms located in non-metropolitan areas of South Dakota.

TABLE 4. TRANSPORTATION METHODS USED BY S.DAK. MANUFACTURING FIRMS TO SHIP PRODUCTS OUT

	% OF TONNAGE GOING BY EACH METHOD: UNWEIGHTED AVERAGES				
	<u>TRUCK</u>	<u>RAIL</u>	<u>AIR</u>	<u>OTHER</u>	<u>TOTAL</u>
ALL MANUFACTURING FIRMS	91	4	1	4	100
<u>SELECTED TYPES:</u>					
FOOD PRODUCTS	86	11	2	1	100
LUMBER/WOOD PRODUCTS	96	4	0	0	100
APPAREL MANUF.	98	--	1	1	100
CHEMICAL PRODUCTS	96	--	--	4	100
ELECTRICAL MACH. & EQUIP.	83	--	2	15	100
MACHINERY, EXCEPT ELECTRICAL	96	--	--	4	100

Source: Sample survey in summer of 1979, by South Dakota State University Economics Dept., of manufacturing firms located in non-metropolitan areas of South Dakota.

TABLE 5. INDUSTRIES EXPECTED TO SHOW LARGEST INCREASE IN NUMBER OF JOBS NATIONWIDE, 1977 - 1990.

<u>INDUSTRY</u>	<u>ADDITIONAL JOBS (THOUSANDS)</u>
Total 10 Industries	16,712
Retail Trade	5,565
State and Local Government, other than education	2,148
Miscellaneous Business Services	2,044
Other Medical Services	1,801
Hospitals	1,703
Wholesale Trade	897
Banking	712
Miscellaneous Professional Services	626
Nonprofit Organizations	609
Doctors' and Dentists' Services	607
Total Economy	24,900
10 Industries as percent of additional jobs in Total Economy	67.1%

Source: Taken from Glen C. Pulver, "Future Employment Growth," University of Wisconsin Community Economics Newsletter No. 42, March 1980. Pulver's source was The Bureau of Labor Statistics, Employment Projections for the 1980's, U.S. Dept. of Labor Bulletin 2030 (1979), PP. 32-33.

SOUTH DAKOTA AS VIEWED BY THE TRAVELING PUBLIC

by
Arnold J. Bateman
Extension Economist Resource Development

Travel is a significant industry in South Dakota. Its potential for future growth has, in the past, appeared very bright.

In 1978, the industry generated \$424,000,000 in direct spending for the private sector and provided jobs for over 21,000 people. State government received over 16 million dollars in state sales tax from the industry and an estimated \$2,540,622 in state gasoline tax.

At the county level, between 6 and 19 percent of the retail sales dollars in 37 counties comes from the tourism - hospitality - recreation industry, Figure 1.

Cities with a sales tax also benefit. For example, Rapid City in 1978 received an estimated \$1,022,980 in taxes from the industry.

At the state level, the travel industry accounted for 7.73 percent of South Dakota's taxable retail sales in 1978.

Twenty-four counties in 1978 accounted for 88.36 percent of the travel industry sales in South Dakota, Figure 2.

While every county benefits some from the travel industry, we can identify those areas or regions that are most depended on travel in South Dakota. These areas are best identified by the shaded areas in Figure 2. The seven county area in western South Dakota is the most dependent on summer tourism. In addition to this, 70 percent of the campground sites, 41 percent of the lodging rooms and 24 percent of the restaurant seats are located in this area.

The other established areas are in counties along the Missouri River, central eastern South Dakota and the Northeastern corner of the state. Some of these counties however, are much more dependent on conventions, meeting attenders and traveling sales people than they are on the summer tourist. Examples of these counties would be Hughes, Brookings, Codington, Brown and Minnehaha.

Hospitality-Travel-Industry Facilities

Many of South Dakota's travel industry facilities are very small businesses.

In the lodging business there are 634 motels and hotels with a total of 15,440 rooms. Of these businesses, 400 have 20 or less rooms and 4 have 200 or more rooms.

There are 133 private campgrounds with a total of 8,129 camping sites. The average size of campgrounds is 61 sites.

There are 1,678 restaurants with inside seating facilities and a total of 137,067 seats.

For the location of the hospitality-travel industry facilities, see Figure 3.

What Happened In 1979?

Until the summer of 1979, the industry's future has been one of optimism. However, as a result of the lack of gasoline availability, rapid inflation and general economic conditions, the industry experienced sizable decreases in the number of visitors coming to South Dakota and in dollars of revenue. This decrease in dollars has been felt by both private businesses and government.

Businesses hardest hit in 1979 were campgrounds, attractions and overflow lodging facilities.

When using 1978 as a base year and comparing revenue for the second and third quarters of 1979 with 1978, the results for the state are as follows:

<u>State</u>	<u>2nd quarter % change</u>	<u>3rd quarter % change</u>
Eating & Drinking Places	+ 9.4	+ 4.9
Hotel/Motel	- 4.8	- 8.5
Campgrounds	- 9.6	-27.7
Amusement & Recreation	- 9.4	-13.9
Gasoline Service Stations	+10.0	- 1.9

These figures have not been adjusted for inflation.

During the third quarter of 1979 Pennington, Davison, Jackson and Lawrence counties had the largest percentage decreases in revenue. They are also among the most dependent counties for summer tourism, Figure 4.

1980 and Beyond

As a result of the mild weather during the winter of 1979 and 1980, there should be an adequate supply of gasoline for the 1980 summer travel season. It is expected that 1980 will be better than 1979 but not as good as 1978 was.

Because of high inflation, energy concerns and high interest rates, the travel industry will need to undergo some major changes in the first half of the 1980's.

Americans will stay closer to home, mass transit will grow in popularity as a mode of transportation to recreation areas, and vacation and other recreation trips will be planned more carefully resulting in longer stays and more combining of vacation trips with business and convention activities.

It may well be 1983 or 1984 before the travel industry is doing as well as it did in 1976, 1977 and 1978.

Those places of business that will be affected the most are:

1. Attractions where a fee is charged.
2. Campgrounds with limited facilities.
3. Small out-of-the way motels in traditionally travel industry impacted areas.
4. Places of business that are unwilling to change to meet the challenges of tomorrow's market.

With these changes comes the following challenges for South Dakota:

1. The travel industry must be recognized as a major industry in South Dakota by both government and retail businesses in those geographical areas where the industry is significant to the economy. This is necessary in order to plan for and develop a stronger industry.
2. Marketing research and development will be an important part of building the tourism industry.
3. Package tours have real potential for the 1980's as more people travel by bus or fly to their vacation destinations.
4. In addition to the above items, South Dakota needs to continue to work on building a vacation image for the state which in turn will result in longer stays and more visitor days.

While the challenges may seem overwhelming to some, I think we can have a feeling of optimism about building a stronger and more stable travel industry during the 1980's.

Leaders in the industry are responding to the challenges and they are determined to succeed.

1978

TRAVEL INDUSTRY RETAIL SALES
AS A PERCENTAGE OF COUNTY RETAIL SALES

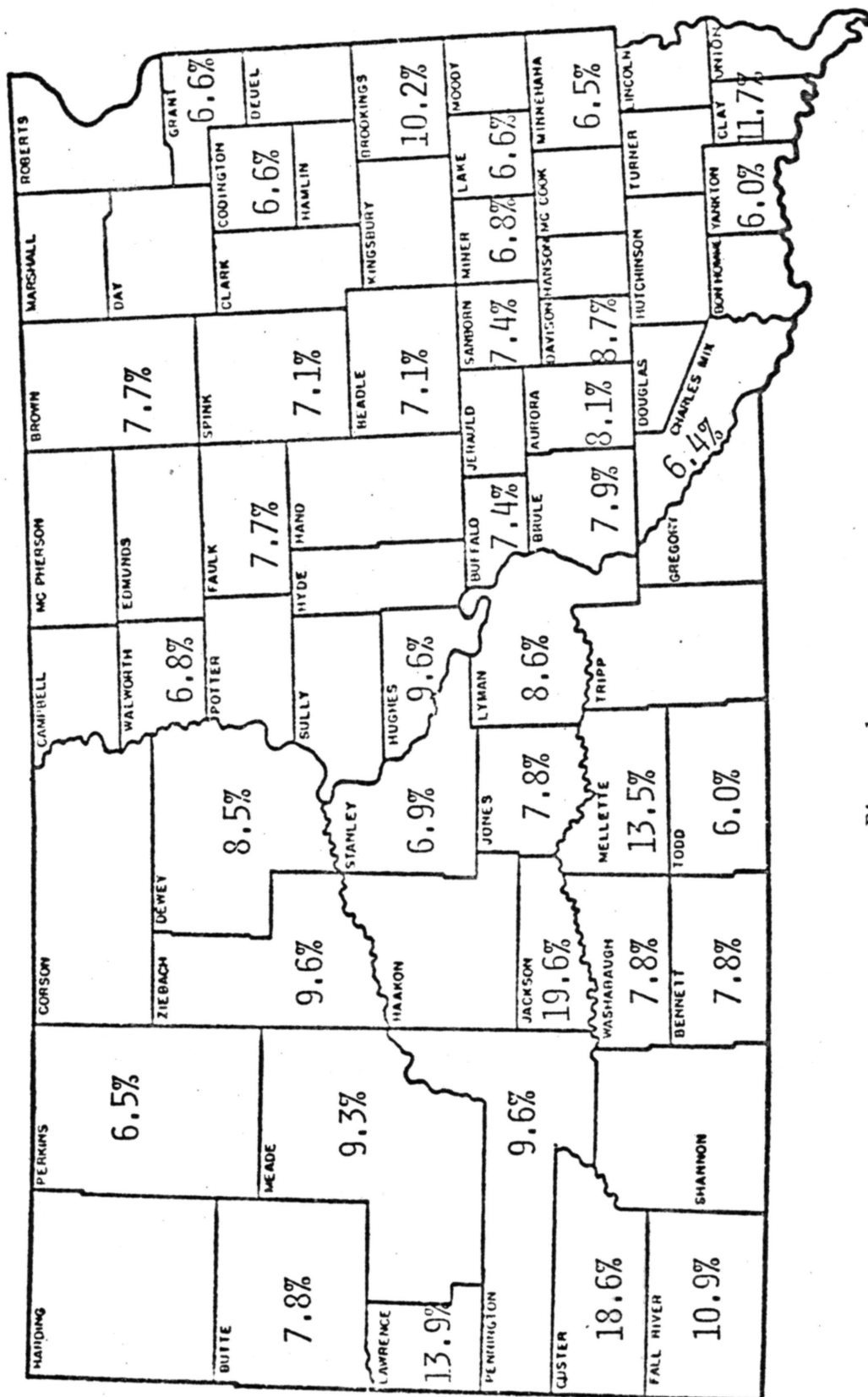
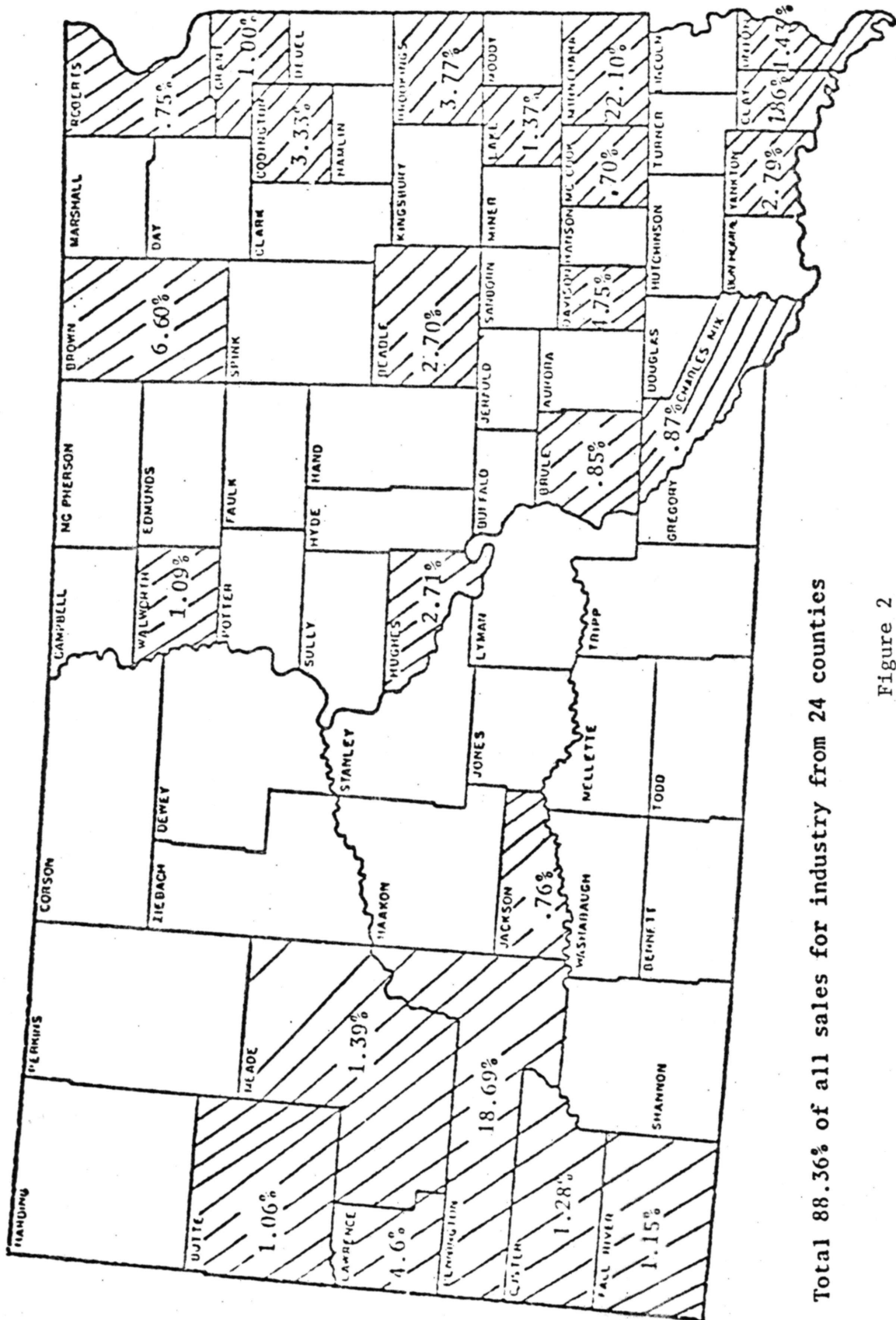


Figure 1

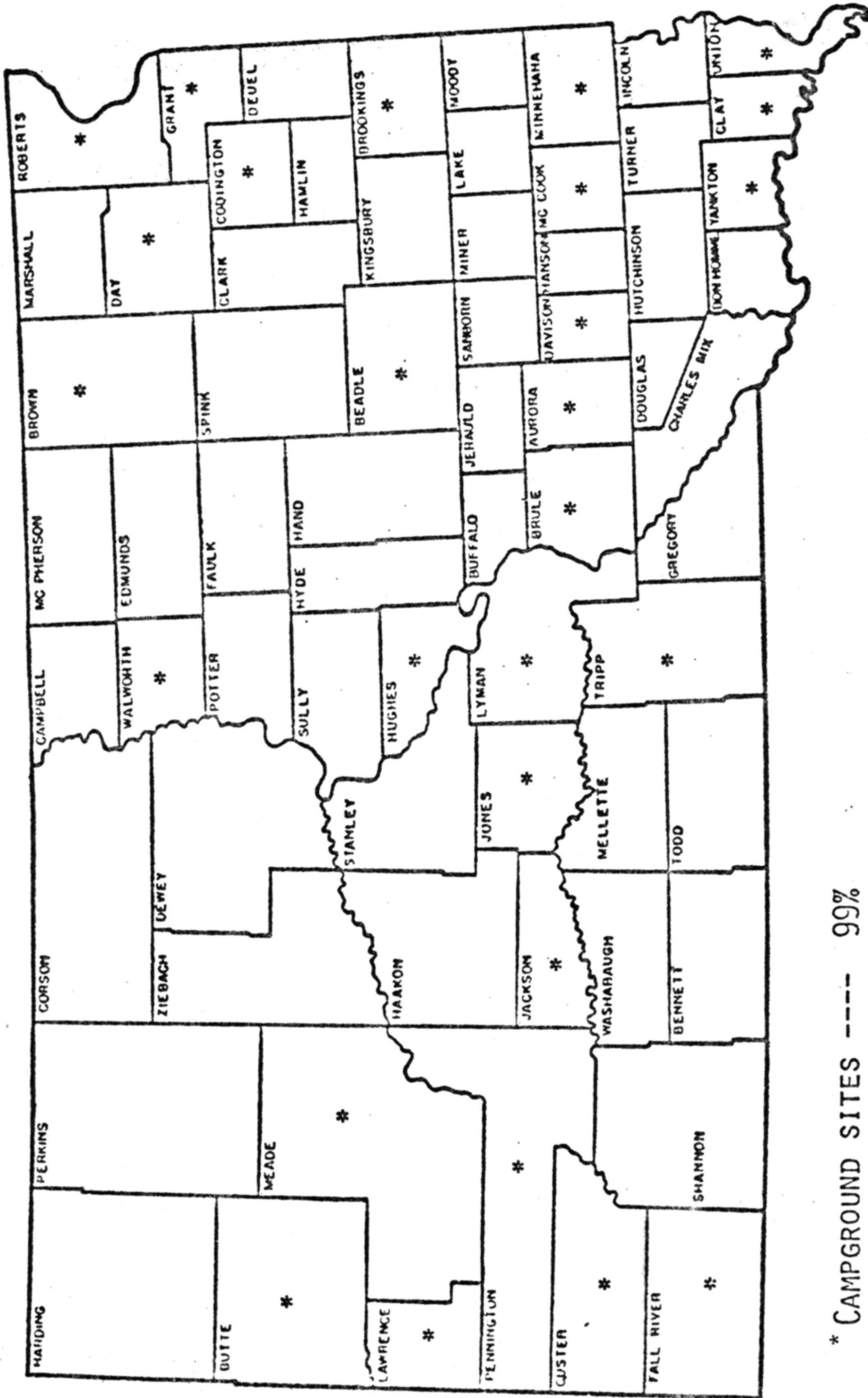
Percent of State's Travel Industry Retail Sales by County 1978



Total 88.36% of all sales for industry from 24 counties

Figure 2

SOUTH DAKOTA HOSPITALITY FACILITIES



- * CAMPGROUND SITES --- 99%
- * LODGING ROOMS --- 90%
- * RESTAURANT SEATS --- 82%

Figure 3

SOUTH DAKOTA 1978, 1979 PERCENT CHANGE
IN TAXABLE SALES

<u>County</u>	<u>2nd Quarter</u> %	<u>3rd Quarter</u> %
Minnehaha		
Eating & Drinking Places	+ 9.3	+ 3.0
Hotel/Motel	+ 5.3	- 2.3
Campgrounds	-29.9	-31.6
Amusement & Recreation Services	- 4.0	-10.0
Gasoline Stations	+ 4.6	+ 1.4
Pennington		
Eating & Drinking Places	+ 1.8	- .8
Hotel/Motel	-14.5	-15.7
Campgrounds	-39.7	-40.3
Amusement & Recreation Services	-13.8	-18.1
Gasoline Stations	- 6.8	-11.7
Brown		
Eating & Drinking Places	+ 7.7	+ 7.7
Hotel/Motel	+12.7	+ 9.2
Campgrounds	--	--
Amusement & Recreation Services	--	--
Gasoline Stations	+ 3.3	-25.0
Davison		
Eating & Drinking Places	+ 7.4	- 2.2
Hotel/Motel	- 8.1	-18.5
Campgrounds	+ 8.9	-88.3
Amusement & Recreation Services	--	--
Gasoline Stations	+32.9	+21.2
Custer		
Eating & Drinking Places	- 4.9	-14.3
Hotel/Motel	- .1	+ 6.5
Campgrounds	+ 1.4	+ 2.4
Amusement & Recreation Services	-97.1	+ 5.1
Gasoline Stations	+45.5	+35.7

<u>County</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>
Jackson		
Eating & Drinking Places	-14.5	-14.5
Hotel/Motel	-23.7	-30.1
Campgrounds	--	--
Amusement & Recreation Services	--	--
Gasoline Stations	-15.8	-14.2
Lawrence		
Eating & Drinking Places	+ 9.8	+ 6.8
Hotel/Motel	-19.7	- 9.8
Campgrounds	- 4.5	-11.8
Amusement & Recreation Services	+84.1	-33.0
Gasoline Stations	+ 5.3	- 7.2
Brookings		
Eating & Drinking Places	+17.3	+20.6
Hotel/Motel	+ 4.5	+ 7.5
Campgrounds	--	--
Amusement & Recreation Services	--	--
Gasoline Stations	+19.3	+16.4
Hughes		
Eating & Drinking Places	+12.7	+ 9.0
Hotel/Motel	+10.1	- 8.5
Campgrounds	--	--
Amusement & Recreation Services	--	--
Gasoline Stations	+14.7	+42.0
Meade		
Eating & Drinking Places	+14.7	+ 3.8
Hotel/Motel	+15.7	-21.2
Campgrounds	-41.6	-51.9
Amusement & Recreation Services	--	--
Gasoline Stations	+19.6	- 6.7

figures have not been adjusted for inflation.

SOME POLITICAL ECONOMICS OF THE PUBLIC REVENUE SYSTEM

IN SOUTH DAKOTA: A LOOK INTO THE 1980s

Agri-Business Day March 25, 1980

by

Philip Favero

Assistant Professor/Extension Specialist in Public Affairs

Introduction

The onset of the 1980s finds South Dakota with a public finance system that has several problems. Resoultuion of revenue system problems will involve many groups, including but not limited to agri-business groups. The next decade will require innovative approaches by the agri-business community-- both academic and private sector groups.

Present Situation

Each state possesses a unique set of physical, political, economic, social, and philosophical conditions. These unique conditions are reflected in fifty unique public revenue systems. Our present revenue system in South Dakota differs from systems in other states in several ways.

Real Property Tax

We are very dependent, first, on real property tax revenues. Repeal of the personal property tax over the past two years will have little effect on our rank as one of the states which relies most heavily on local sources of revenue--mainly the real property tax. In 1977 South Dakota was third among the fifty states in percentage of total state and local revenue derived from local revenue sources.¹

State Sales Tax

Notwithstanding our dependence on the property tax, we have had, during the past decade in South Dakota, significant increases in general sales tax revenues. Over the period 1970-1979, state sales tax revenues increased by over 169 percent. During the same period, the Consumer Price Index (CPI) increased by 87 percent.

¹Source: Adapted from Advisory Commission on Intergovernmental Relations, Significant Features of Fiscal Federalism 1978-79 Edition, (Washington, D.C.: U.S. Government Printing Office, 1979), Table 32, p. 50.

The source of this growth in South Dakota state sales tax revenues over and above the rate of general inflation during the 1970s is, however, unknown. One can hypothesize that because neither the tax rate nor the base changed significantly over the relevant period, growth in revenues might be attributed to: increased tourist spending; substantial declines in the rate and amount of savings; increased consumer debt; or a substantial increase in subterranean (undocumented) income in the state. In any case, continued real expansion in sales tax revenues from these sources is highly uncertain.

Policies to insure continued growth in sales tax revenues are not attractive. A permanent increase in the tax rate would risk significant leakages of purchases into neighboring states. And the tax base has now been broadened to the limits of administrative efficiency as a method to replace part of the lost personal property tax revenues.

Overall Tax Burden

By one criterion the South Dakota public revenue system is fairly typical. Our total state and local revenue burden relative to personal income tends to be just slightly above average among the fifty states.² Our total state and local revenue burden relative to income is lower, however, than four of the six states which touch our boundary.³

Current Problems

In 1776, Adam Smith in his seminal work, Wealth of Nations, suggested four criteria by which to judge a revenue system. These criteria are no less relevant today, and they serve, moreover, to distinguish current problems in the state and local revenue system in South Dakota.

Efficiency

Efficiency involves the cost of administration of a source of revenue relative to revenue obtained. The sales tax is an efficient revenue source because it utilizes nonpaid tax collectors. The real property tax, with its complex and costly assessment process, is much less efficient. Only the complete elimination of the real property tax, however, would allow the dismantling of the existing assessment administration.⁴

Adequacy

Governments as purchasers of goods must face, of course, price escalations similar to those faced by households and businesses. The GNP deflator for state

²Ibid., p. 35.

³Ibid., p. 35

⁴Passage of Dakota Proposition would, after the initial administrative adjustment, reduce but not eliminate the need for property assessments. New property improvements would need to be assessed, using the 1977 assessment guidelines.

and local governments has actually been increasing more rapidly in recent years than has the parallel price index for households, the CPI.⁵

Property tax revenue increases in South Dakota during the 1970s failed to keep pace with either the CPI or the GNP deflator.⁶ Sales tax revenue growth exceeded growth in the CPI but, again, future growth is uncertain. More typically, and according to tax theory, sales tax revenues are expected to grow at a rate close to changes in the CPI.

New demands on government resources are also a factor. At the state level, new transportation expenses loom large. Railroad expenses may require annual outlays in addition to the initial expense of railbed purchase. Engineering estimates also suggest that the state roads and bridges have a deferred maintenance problem which could cost many millions of dollars to resolve. Sales tax broadening will only cover part of the obligation the state assumed to replace revenues lost with the repeal of the personal property tax.

At the local level, schools use the most revenue dollars. About two thirds of the local property tax revenues in South Dakota go to schools. Declining student enrollments offer some prospect of declining revenue needs. Declining enrollments must be of such magnitude, however, so as to allow for reductions in staff positions or closures of whole buildings for savings to appear. In many school districts which already have small numbers of students, savings will only occur if the district are eliminated through consolidations. Savings in school expenditures by reason of declining enrollments will be neither automatic nor easy.

Meanwhile, continued low salaries for teachers and administrators involve hidden costs in staff turnover and low morale, and these threaten the quality of education in the state. Unequal taxing power because of unequal property wealth among school districts is a state constitutional issue currently before the courts. Resolution of this issue may require a much larger state outlay of funds for revenue equalization among school districts.

Adequacy of the current revenue system is, in sum, doubtful. Sales and property taxes are heavily used sources of revenue, and a continued real growth rate in sales tax revenues seems unlikely. Proposed changes in Federal revenue sharing are likely to mean a decrease in such funds. New demands on government revenues will emerge, and old demands will not quickly recede.

Equity

Several equity measures are possible for tax analysis and such measures suggest equity problems with the present revenue system in South Dakota.

The revenue system in South Dakota is regressive. That is, a greater percentage of the income of lower income families goes to state and local

⁵During the period 1970-1979 the GNP deflator increased 101% as compared to the 87 percent increase in the CPI. Source: Economic Report of the President January 1980, p. 207, p. 259.

⁶Property taxes increased by 73.6 percent over the period 1970-1979.

governments in South Dakota than does the percentage of income from higher income families. Reductions in family income result, generally, in an increased percentage of income going as taxes or public fees.

There may also be large disparities in the tax burden among families with equal incomes. If, for example, large real property investments are required to produce income, those investments create tax liabilities. Income derived from non real property sources results in lower taxes.

Finally, taxes paid may not correspond well with benefits received. Property owners without children will, for example, subsidize public education for families with children. It is important to note, however, that public services often create indirect benefits to citizens in general. Thus education benefits both families with school children and the general community.

Acceptability

Twenty five thousand signatures to place the Dakota Proposition on the ballot and numerous personal conversations with citizens across the state suggest that many South Dakotans find the present public finance system imperfect, if not unacceptable.

Several factors have contributed to this feeling. First, rapid inflation has slowed, halted, and in some cases reversed real growth in household incomes. Households receiving fixed nominal incomes have been severely deprived of purchasing power. Expectations about what nominal increases in household income might buy have resulted in money illusion difficulties. Citizens strike back through the tax system: tax bills are, in a sense, controllable (through political action) and the rationale can be one of government waste (a rationale which often ignores the fact that inflation boosts prices in the public as well as the private sector.)

Other citizens who are unhappy with the current revenue system cite the burdensome nature of property taxes in South Dakota. Still others cite the equity problems in our present tax system.

Policy Options

Several public revenue policy options for South Dakota are distinguishable. Analysis of these options requires consideration of: incentives created; likely outcomes; and the likely distribution of costs and benefits among South Dakotans. Some major policy options include the following:

Maintain the Status Quo

Maintenance of the status quo, or at most tinkering at the margin, is the policy option which, with one exception, has been chosen in South Dakota since the 1930s. No major new tax has been added since the 30s. The one exception to this policy option came in 1978 with the repeal of the personal property tax.

Maintenance of the status quo is possible even with major changes in factors affecting public finance. Tax bases such as income, wealth, or consumption may change. Services may be added or deleted. The tax structure changes, however, only in political ways, either through direct citizen action or through the actions of public officials. A point worthy of note for agribusiness interests is the major reordering of the political process in South Dakota which will occur with reapportionment of the State Legislature subsequent to the 1980 population census. This census will likely confirm and hasten the trend toward a political power redistribution away from rural and toward urban interests in this state.

Pass the Dakota Proposition

A major change in the present revenue system will occur in November, 1980 if the Dakota Proposition becomes part of the state constitution. Property tax revenues would decline by half or more. More urban local units of government would, in general, lose a greater percentage of revenues than would rural local units. Non agricultural real property owners would, in general, have their property tax burdens reduced by a greater percentage than agricultural property owners. Tax replacement and tax reform would be made more difficult at both the state and local level.

Supporters of the proposition seem to be of two minds: there are those who feel that there is great waste in local government and therefore seek tax reduction; and there are those who feel that the current tax system is unfair and who seek tax reform--essentially with an income tax replacement for part of the real property tax. Problems arise because sizeable tax reductions risk the reduction or elimination of desired programs and because tax reform may not occur even with major revenue shortfalls. Some are willing to accept these risks while others are not.

Employ More User Fees

User fees, charges for specific public services, are likely to become a more significant revenue source in South Dakota. Substantial introductions or increases in fees for public parks and recreation facilities, trash and water services, and other local public programs would result, according to the California example, from passage of the Dakota Proposition.

User fees offer several advantages: they assess the costs of public programs from those who directly benefit; they serve as a measure of citizen demand for programs; and they ration programs to those most willing and able to pay. Some disadvantages are also evident: they do not assess costs of programs on those who enjoy indirect benefits; they exclude those willing but not able to pay; they discourage use of services by those for whom a program was specifically designed; and they may often create a regressive burden in the revenue system. The last disadvantage should be noted along with the consideration that a user fee is likely to replace a property tax payment--substituting, thus, one regressive source of revenue for another.

Expand the Use Value Assessment⁷

Market values for parcels of land reflect one or more of several factors: the capitalized income earning potential as conditioned by the physical properties of the parcel itself and expected product prices; the income potential of the parcel when combined with other land already owned; income potential for non agricultural development; and a hedge against inflation. Use value assessment would attempt to tie property tax assessments to the first of these four factors--physical properties and expected product prices.

A legislatively funded study is currently underway to assess the potential impacts of such assessments in South Dakota, including the potential for shifts in property tax burden within the agricultural property class and potential shifts between agricultural and non agricultural property owners.

Actually, South Dakota state law now allows some use value assessment and such assessment is reflected in relatively low assessment to sales ratios for agricultural property, state-wide. Additional legislation is a political issue, and the rural to urban power shift will carry increasing political weight in future legislative sessions.

Impose Individual and Corporate Income Taxes

Imposition of individual and/or corporate income taxes offer several advantages for South Dakota. They could serve to: reduce the burdensome nature of present taxes--especially the real property tax; reduce the regressivity of the present tax system; adequately fund desired programs; provide for more revenue equalization among school districts; and tie tax burdens more closely to income in a state where income varies significantly.⁸

Political acceptability is a major hurdle--the fear being that income taxes would be 'additions to' rather than 'replacements for' present taxes. Even proposed legislation which would have specifically designed income taxes to replace current tax sources has not been successful because of the underlying fear of tax addition.⁹

Initiate a Circuit Breaker for the Real Property Tax

South Dakota currently has a relatively small rebate provision in the real property tax which provides a state rebate for the elderly or disabled homeowners

⁷My thanks to Professor Larry Janssen for his contributions to this section.

⁸Revenues could be made more certain by the establishment of a contingency fund, i.e. a fund to draw upon in lean years and to add to in fat years.

⁹See South Dakota House Bill 691 of 1977 which would have replaced, almost totally, the real property tax now going to support schools with personal and corporate income taxes.

who have very low incomes. Other states have much larger "circuit breaker" programs used to reduce the property tax burden and to eliminate property tax regressivity for all homeowners and renters.¹⁰ Enactment of an expanded circuit breaker program in South Dakota would require additional sources of revenue at the state level.

Conclusion

Several themes are discernable from this discussion of public revenues in South Dakota. Tax mix--the heavy dependence on the real property and sales taxes, the regressivity of our present tax system, and revenue inadequacy--given the uncertain future yield of sales tax revenues coupled with emerging program requirements, all imply the need to consider revenue system reform in our state.

Taxes, like energy supplies, general inflation, resource conservation, and transportation are public issues which will significantly affect agri-business interests. All of these issues are, however, broader than agri-business and most of the political actors who will establish policy for these issues will have concerns other than agri-business. Even in South Dakota, urban interests, albeit urban interests dependent in part on agri-business welfare, will gain power. The 1980s will demand new and innovative approaches by the agri-business community in South Dakota. It will be necessary to gather information about how broad issues affect agri-business in our state. It will be necessary for agri-business groups to discern common interests with non-traditional allies. Research and information provided by the Agricultural Experiment Station and the Cooperative Extension Service can contribute to the process of resolving these broad problems.

¹⁰In Oregon, for example, an income ceiling for qualification was set in 1978 at \$15,999. The program involves a refund of all property taxes up to various maximums that depend on income. For homeowners, these maximums ranged, in 1978, from \$655 if household income was under \$500, to \$115 if household income was \$15,000-\$15,999. For renters, maximums ranged from \$328 if household income was under \$500 to \$58 if household income was \$15,000-\$15,999. (Seventeen percent of rent equaled the tax equivalent.) Similar broad programs exist in Hawaii, Maryland, Michigan, New York, Vermont and Wisconsin. Source: Advisory Commission on Intergovernmental Relations, op.cit., Table 44, pp. 64-68.

AGRI-BUSINESS DAY WRAP-UP

by

Dr. John E. Thompson, Head
Economics Department

I think we have heard today that the name of the game for economic growth and survival for the 1980s for those living in South Dakota's rural economy is management, marketing and institutional arrangements to secure the highest quality of living possible.

In terms of management, it is not enough that we know how to produce crops or raise livestock as important as that is. It is equally or perhaps more important for farmers and ranchers to be able to make wise economic decisions about what products to raise and in what quantities in order to take advantage of expected economic changes in demand relative to supply.

Equally as important for economic success will be decisions relative to marketing. Success or failure often rests on a few cents per bushel or a few cents per pound. Wise marketing strategies year after year can add up to a substantial increase in net income. This will be vitally important to meet increasing costs of capital, energy and other inputs needed for efficient production. It will also be needed to meet the increasing costs of goods and services essential to quality family living.

In addition, it has been emphasized that the economic well-being of society in South Dakota in the 1980s will depend on our wisdom and willingness to develop and maintain institutional structures that encourage economic development as well as help meet other needs of the citizens in this state. For example, structuring an adequate and equitable tax system to finance those types of services that provide the basis for encouraging economic growth and improving quality of living is vitally important.

Dr. Theodore Schultz, the recent co-recipient of the cherished Nobel Memorial Prize for Economics has a message of real relevance for those concerned about the economic future of South Dakota. He has shown that throughout the world one of the highest investment returns in achieving economic growth and development are the investments in human capital. This means adequately supporting research and our primary, secondary, higher and continuing educational programs.

We need to think very carefully about the wisdom of reducing our investments in human capital even though costs of living will probably continue to increase in the 1980s. In my judgment, without adequate investments in our research and educational programs, we will experience economic problems much worse than would otherwise be the case. Millions of dollars are at stake for the people of this state resting on our decisions of whether we decide to maintain, cut or expand our investments in education and research--not just for the 1980s but for generations beyond.

In a recent paper given by Dr. Schultz, he made a statement relative to investments in education that we should all think about in our deliberations on how to stimulate greater economic development in South Dakota.

"Advances in useful knowledge are compelling dynamic forces. Such new knowledge is the mainspring of economic growth. Were it not for advances in knowledge, the economy would arrive at a stationary state and all economic activities would become essentially routine in nature. Over time, new knowledge has augmented the productive capacity of land, and it has led to the development of new forms of physical capital and of new human skills. The fundamental dynamic agent of long-term economic growth is the research sector of the economy."¹

Not only is the research effort in an economy such as ours vitally important, it is perhaps equally important--especially in an agricultural state--for the research information to be effectively distributed and explained to our citizens. It is most important for us to compete with other regions in the nation in agricultural and industrial activities if our citizens are to achieve the highest possible quality of living. This is an important challenge and indeed a real opportunity for all of us for the 1980s.

Special thanks are in order to our keynote speaker, Dr. J. Carroll Bottum, to staff on our program, to Robert Antonides who has and continues to assume major responsibilities for programs and arrangements for our Agri-Business Day, to the staff from our Agricultural Information Service and to all of you who attend our annual Agri-Business Day activities.

Also, congratulations to our Agri-Business Person of the Year, Dale Borchard, and his wife Evelyn.

¹Schultz, T. W. "The Economics of Research and Agricultural Productivity." An occasional paper written for the International Agricultural Development Service, University of Chicago, Chicago, Illinois.